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ABSTRACT

This paper focuses on standards-based teacher licensure in Alaska. Section 1, "Introduction," examines the history of schooling in the United States, noting different periods of reform. Section 2, "School Reform Since 'A Nation at Risk,'" discusses how that report shifted the focus for reform. Section 3, "Education Standards," focuses on standards-setting in core subjects and standards-setting in the states. Section 4, "Assessment and Accountability," looks at how new student assessments were expected to be aligned with states' standards. Section 5, "Teaching," discusses teacher standards and assessments and presents implications for preparation, licensure, and professional development of teachers. Section 6, "Recommendations," stresses the importance of: knowing appropriate content and pedagogy; knowing public expectations for students' learning (state standards) and being sure that assessments capture what is important; and knowing the context of the work. (Contains approximately 1,000 references.) (SM)

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Education Standards and Teacher Licensure: The State of States' Standard-setting and Standards-based Teacher Licensure Recommendations for Alaska

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We need more thoughtful and useful collaboration between the Alaska Department of Education and teacher preparation programs -- including a genuine, fully developed INTASC partnership -- to provide the highest quality learning environment possible for Alaskan students. Now that we have set standards in Education, it behooves us to be sure that teachers, as well as students, meet our expectations for excellence.

Pamela Keating
Washington DC

Introduction

The story of American schooling, like the history of the country itself, is one of personal perfectibility and social melioration. Sprung from 19th century rationalism, education in this new nation was deemed valuable for both individual betterment and social benefit. But the individualism we prize -- educationally and elsewhere -- the development of personal talent and interests, has always been secondary to the development of a political democracy. A government relying on individual participation requires an informed citizenry so self-government can work. And individual protection for each member of this government of the people requires an interest (simultaneously selfish and altruistic) in the development of all the rest: our lives are literally limited by the ignorance or ignobleness of others.

In a powerful essay penned during the Army-McCarthy hearings in the mid-nineteen fifties for *Life* magazine, the distinguished constitutional historian, Henry Steele Commager asserted that "Our Schools Have Kept Us Free."[1] In the essay Commager traces four themes characterizing American educational development. Intellectually interesting in themselves, all are historically satisfying, too, since they correspond, roughly, to particular periods of American political development, and so, capture the background for educational development. But each also describes an accommodation to the reality of American political experience, the exigencies of a particular time, that argues for a somewhat different view of American education: that is, that our schools reflect the society they serve. Like the country itself, American schooling is adaptable; its very adaptability an essential feature for continuous social reconstruction and renewal.

The first of Commager's great themes, corresponding to the development of new nationhood, was the importance of creating an "enlightened electorate" for democratic self-government. This essential purpose for American schooling was initially articulated by Thomas Jefferson, whose bill for the Commonwealth of Virginia proposed a "Crusade Against Ignorance": free schools for free men.[2] The essentiality of education in a political democracy is almost axiomatic now, over two hundred years later, as this country contemplates its growth and continuing vitality. But it was not always so; nor has development been seamless or smooth. Competing interests for unfettered individual freedom, economic development at the expense of individual benefit, and multiple public purposes have obscured, from time to time, our focus on what is essential about the enormous public investment we make in education for all our citizens.

This over-arching mutuality of Democracy and Education, later eloquently reformulated for the modern period by the American philosopher of democracy, John Dewey, has been the dominant rationale for public education in this country since its inception. In its name, we

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[1] Henry Steele Commager, "Our Schools Have Kept Us Free," *Life*, October 16, 1951, pp. 46-47, called the "manifesto" of American Education by the editors of the predecessor journal to the History of Education Quarterly, the History of Education Journal, published annually, from 1949-1959 by the History of Education Section of the National Society of Colleges of Education.

[2] Thomas Jefferson, "A Bill for the More General Diffusion of Knowledge," in Crusade Against Ignorance (Thomas Jefferson on Education), Gordon C. Lee, ed. (New York: Teachers College Press of Columbia University, 1967), pp. 83-84.

have compelled uniform attendance, with corresponding sanctions for non-participation; we have prepared and trained workforces for various economic sectors and interests, (and, on occasion, used the schools as "holding tanks" to cool out overheated labor markets); and, as a key form for enculturation, we have inculcated dominant beliefs and mores, (without adequate attention, sometimes, to the individualists and dissenters among us). But in its purest and most sublime form, schooling in this country has been primarily preparation for democratic living.

> . . . more than a form of government: it is primarily a mode of associated living, of conjoint, communicated experience, the extension in space of a number of individuals who participate in an interest so that each has to refer his own action to that of the others to give point and direction to his own . . . .[3]

The Supreme Court has repeatedly recognized this public purpose[4] and has augmented it only once, in the landmark Wisconsin v. Yoder[5] case in 1972, when an Amish eighth grader was exempted from compulsory attendance requirements because, in a self-sufficient community, he would not constitute an economic burden to the state. Political and economic viability, then, are the twin justifications for American schooling as we know it. The rationales for what we teach, to whom, and for how long. What we seek are assurances that the polity is safeguarded and preserved, and individuals assume responsibility for their own lives.

The earliest provision of public education was explicitly religious; the Massachusetts Bay Colony's "Ould Deluder Satan Act" of 1647[6] was a clear commitment on the part of the dissenting Protestants who settled that shore, to use education as a prophylactic against sin and delusion. If, as a pre-condition for personal salvation, one had to be able to read the Word of God, to conform one's self to it, then literacy was fundamental for everlasting life. But by the founding of the Early Republic, those initial pilgrim influences had been superseded by a more expansive view of public purpose, and the common good, that separated public and private life, and built "a wall of separation" between our shared secular society and the religious affiliations and experiences of a pluralistic people.

Commager calls the second thematic period of development, "Nationalism," a century when schooling kept a diverse, and physically attenuated people together, transcending regionalism and sectionalism as well as sectarianism, and bridging the social and geographical gaps in a progressively expansionist country. In the shared songs and stories, customs and conventions, specifically taught and disseminated through the schools, during the mid- to late eighteen hundreds, the American people stayed together, and came back together after a wrenching civil conflict, across an increasingly vast area of economic and political expansion. The historian Frederick Jackson Turner, positing a "frontier thesis"[7] to explain American development, described the American people, and the

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[3] John Dewey, Democracy and Education (An Introduction to the Philosophy of Education). (New York: The Macmillan Company, 1924), p. 101.

[4] Cf., eg., Minersville School District v. Gobitis, 310 U. S. 586 (1940); Board of Education v. Allen, 392 U.S. 236 (1968); Tinker v. Des Moines Independent Community School District, 393 U. S. 503 (1969), as well as, of course, Brown v. Board of Education, 347 U. S. 483 (1954), and subsequent school desegregation cases.

[5] Wisconsin v. Yoder, 406 U. S. 205 (1972).

[6] "Massachusetts School Law of 1647," as reprinted in Sol Cohen, ed., Education in the United States (A Documentary History) (New York, NY: Random House, 1974), p. 394.

[7] Frederick Jackson Turner, The Significance of the Frontier in American History. (New York: Ungar, 1963).

country itself, in terms of a moving line locating the interaction between civilized areas and frontier conditions. That restlessness in development, the interplay between developed and undeveloped living conditions, a perception of limitless possibilities and the sense of a boundary transcended defined the American temperament, and explained American development.

The Common School movement of the middle of the nineteenth century was a natural expression of the new nationhood whose reach seemed boundless, whose possibilities, profound. To preserve social well being, schools were construed as a necessary unifying force, as well as a "civilizing" influence in the country's westward expansion. Land was set aside in every township for school construction. And rudimentary readin' 'ritin' and 'rithmetic were widely, however basically, available to the citizenry. Education was locally controlled, as it remains, supported by each state.

But, educationally, the good of the country takes precedence over sectional interests and practices; national interests transcend local preferences and prejudices. The federal government -- the judiciary, and Congress, on occasion -- has interceded on behalf of individual citizens, vindicating their interests in the face of a state's majoritarian will, protecting personal and civil rights, as well as justifying public purposes.

The American landscape painter John Gast's "Spirit of the Frontier" captures this sense of nationhood, and the role schooling played in American stability and development.[8] In the center of the painting stands a giant goddess, her feet planted roughly in Oklahoma and Texas, her head rising in the clouds over Canada, gazing far out to the Pacific. Behind her lie scenes of a settled eastern seaboard, steamships plying the waters of rivers and lakes, factories and farmers at work. She moves as a vanguard for a westward stream of people, covered wagons and lines of prospectors, and a steam engine running west. Ahead of her flee American Indians, and stampeding buffalo, a picture of chaos and dislocation. In the crook of her arm is a coil of telegraph wire linked to a succession of poles behind her, and to her breast she clutches a book, titled simply "Schoolbook" -- the twin symbols of ordered civilization and progress: communication and education.

Textbooks for schooling appeared in the latter part of the century, a series of basic readers -- McGuffey, and following[9] -- capturing the ethos of honesty and integrity that defined character and promised opportunity to American youngsters. Individualism and "pluck" were prized, and accounts elaborated for learning in schools. And patriotism and civic responsibility were honored as basic to the American way of life. Social conformance was perceived as being in the public interest, and schooling was seen as sufficiently valuable that all must be compelled by law to attend. But what to do there, and who would decide, was never well-examined or questioned. The realization of an agrarian ideal, individual land ownership, peaceful self-sufficiency on a family farm, had been given a physical reality in these United States, particularly in the vast development of the plains. The fecundity of the land, and its promise for this people fulfilled the questing spirit and heartfelt longing for new life that had lured pilgrims and pioneers alike. Schooling simply secured the dream.

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[8] For a detailed description of the painting and the phenomenon of compulsion mid-century, see Charles Burgess, "The Goddess, the School Book, and Compulsion," Harvard Educational Review, 46 (May, 1976), pp. 199-216.

[9] McGuffey's Eclectic Primer (Primer through the Sixth) [Revised Edition] New York, NY: Van Nostrand and Reinhold, 1881, 1896, 1909.

Social change and the stabilizing influence of schooling were not confined to the frontier, however. Industrial development, leading up to and through the turn of the century, redefined American experience and created a new role for schools. A huge influx of immigrants, needed to power the factories of America's emerging economic development, contributed to crowded cities and an expanded diversity in schools serving urban communities. Many of these new immigrants were from southern Europe, quite different from the northern European immigrant settlers and pioneers who had preceded them. Commager calls this period one of "Americanization," an unlovely episode in our country's history when schools were used to "homogenize" a disparate population.

The educational historian David Tyack[10] has eloquently described how the interests of labor leaders desirous of keeping adolescents out of the industrial labor markets, social workers, concerned about sanitation and health in the tenement living conditions of urban centers, and educators interested in professionalizing their positions, mutually satisfied their separate interests in the development of schools as centers for social conformance and development. Children were separated from their families by a new language and the customs and mores of a new country -- Americanized names, middle class habits of behavior and personal hygiene, and learning disconnected from their lives. The development of secondary education was ill-defined then, and still remains lacking an academic purpose or cohesive rationale; high school developed primarily as a mechanism for social stability and vocational preparation. And eventually, as the educational historian Joel Spring describes in The Sorting Machine (National Education Policy From 1945),[11] as a mechanism for sorting the young adult population. (Even though a prestigious Commission recommended against separate learning for students who would go on to college study, or those "destined for the world of work," the forces for efficiency and social control predominated, resulting in the highly "tracked" secondary schools we have with us still.[12])

The byproduct of individual and social wealth resulting from phenomenal industrial development was accumulation, and, in schooling, curricular accrual. Modes of publication expanded and increased; communication and transportation altered American notions of community; and the standardization of the factory floor, its efficiency and economy, began to shape American schooling.[13] Textbook publishers defined curricular content; and, until this current period of educational standard-setting, still do. Just as test developers decide what must be known. Neither texts nor tests have ever been controlled

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[10] Under a subhead of the same name, "Americanization," found at p. 229 and following in his book, The One Best System (A History of American Urban Education). (Cambridge, Massachusetts: Harvard University Press, 1974). Tyack provides examples of this Americanizing influence in education, as well as rationales for it.

[11] Although Joel Spring's original The Sorting Machine (National Education Policy Since 1945). (New York: David McKay Company, Inc., 1976), is now out of print, it is possible to obtain The Sorting Machine Revisited (National Educational Policy Since 1945). (New York, NY: Longman, 1989).

[12] In 1945, for example, "The Harvard Committee on Secondary Education," noted that "Most students who expect to go to college are now offered an almost wholly verbal type of preparatory training, while hand training and the direct manipulation of objects are mainly reserved for the vocational fields. This is a serious mistake." Sol Cohen, ed., Education in the United States (A Documentary History). (New York, NY: Random House, 1974), p. 262).

[13] For an exquisite critique of the factory "efficiency" that shaped American schooling this century, see Raymond Callahan's Education and the Cult of Efficiency. (Chicago, IL: The University of Chicago Press, 1964). For a more expansive description of social change in turn-of-the-century American development, see Howard Mumford Jones' almost onomatopoeic Age of Energy. (Varieties of American Experience, 1865-1915. (New York, NY: Viking Press, 1971).

by educators nor rationalized in relation to actual school purposes. Market forces -- currently, the large- state purchasers of textbook series, or tests -- control what will be taught and tested.

Seldom were schools criticized. An exception was the crusading "yellow" journalist Joseph Mayer Rice, who excoriated schools and the living and learning conditions of urban children at the turn of the century. But, until the revisionist historians of education in the 1970's, only scattered voices questioned the content or form for schooling in this country[14] -- with one important exception.

Education was, primarily, a stabilizing social force this century. Progressive thinking in school and society provided some modernizing influences, but changes were modest, and the education of those who fought World War II was substantially the same as it had been for their parents, and, as it turned out, for their children, as well. The social mobility of wartime, however, and the realignment of daily living that it brought, changed how Americans perceived their lives and opportunity structures for the Good Life. And increasing pressures were put on schools to meet the demands of modern living -- for more "relevant" coursework -- and extracurricular activities proliferated in an expanding economy.

The shock of the Soviet Sputnik space satellite launch, however, undermined our country's confidence, and the blame for "beating us in the space race" was fixed on schools. The problem was perceived as one of inadequate mathematics and science instruction. And a massive federal investment in upgrading teachers' knowledge, and writing new texts for advanced high school mathematics and science, altered the quality as well as the quantity of secondary math and science coursework. Later, a major national curricular improvement project in the social sciences was attempted but failed,[15] not only because of the effete east coast intellectuals who created it apart from the actual work of teachers and schools, but, also because there was little time in the crowded curriculum for new or expanded subject matter. The "seven-period" day had been reified in the modern educational mind, along with the three to four secondary curricular tracks, such that school organization seemed impervious to any substantive change.

Besides, our attention was elsewhere. Commager construed Equalizing Educational Opportunity as the dominant theme in modern American educational development. And so it seems. The Civil Rights Movement and the Supreme Court's Brown vs. Board of Education[16] decision had important effects in schooling. So too did an emerging feminist consciousness across the country. A new, more obviously different, Asian immigrant population suggested not only different curricular content but different frames of reference for American experience. And, by the 1970's we sought greater equality of educational opportunity for those with physical and mental handicapping conditions. But equity in access, even the dramatic and continuing effort to equalize educational tax burdens and community expenditures across the states, failed to have much impact on what was taught or how it was taught. Equity was really about access and comparable quality of resources

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[14] Cf., George S. Counts' Dare the Schools Build a New Social Order? (Carbondale, IL: Southern Illinois University Press, reprinted, 1985) and Arthur Bestor's Educational Wastelands (The Retreat From Learning in Our Public Schools). (Champaign-Urbana, IL: University of Illinois Press, second edition, 1985).

[15] A fine description of the MACOS (Man, A Course of Study) project is Peter Dow's Schoolhouse Politics (Lessons from the Sputnik Era). (Cambridge, MA: Harvard University Press, 1991).

[16] Brown v. Board of Education I, 347 U. S. 483 (1954) and II, 349 U. S. 294 (1955).

and experience; little was done to re-think teaching and learning. Even the brief excitement stirred by the epithet that "Johnny Can't Read," did little to actually alter schooling itself.

That all changed -- and dramatically -- with release of the Nation At Risk report in 1983. The inflammatory rhetoric of this little pamphlet published by President Reagan's National Commission on Excellence in Education[17] galvanized the country, and initiated the greatest and most widespread discomfort about schooling, and most prolonged period of change in education, this country has ever experienced.

Before exploring this recent, and extensive, period of school reform, another, quite different, forum for reforming American education must be mentioned. Educational historical scholarship underwent a sea-change in the 1970's, first with the publication of The Roots of Crisis[18] (whose *Introduction* became an instant classic in American educational historiography), and, then, with work by Joel Spring, Colin Greer, Michael Katz, and the more moderate David Tyack, and other revisionists.[19] They wrote a new history of American education, drastically different from the proud, triumphal story of American development and achievement best exemplified by Elwood Patterson Cubberley's History of Education; Educational Practice and Progress Considered As a Phase of the Development and Spread of Western Civilization.[20] The revisionists sought to show "the warts and all" of schooling in America -- not just outright racism, but the dominance of middle class, even elitist perspectives, unquestioned assumptions about the ordering of the modern world, and schools' roles in perpetuating myths of majoritarian cultural hegemony and the economic stratification of American society. They unveiled inequity and inadequacy, and questioned the nature and role of the schools in contemporary American culture. Their conceptual and substantive contribution to changing education is unheralded in the current period of school reform, but provides a scholarly foundation for conceptualizing and constructing actual alteration and alternatives in contemporary American education.

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[17] The National Commission on Excellence in Education. A Nation at Risk: The Imperative for Educational Reform. (Washington, DC, 1983).

[18] Clarence J. Karier, Paul C. Violas, and Joel Spring, eds., Roots of Crisis (American Education in the Twentieth Century. (Chicago, IL: Rand McNally, 1973).

[19] Cf., Colin Greer, Cobweb Attitudes (Essays on Education and Cultural Mythology). (New York, NY: Teachers College Press, 1970); The Great School Legend: A Revisionist Interpretation of American Public Education. (New York: NY: Basic Books, 1972); Divided Society (The Ethnic Experience in America). (New York: NY: Basic Books, 1974); Foundations of Education (Dissenting Views). (New York, NY: Wiley, 1974); and, Allan Gartner, Colin Greer and Frank Riessman, eds., New Assault on Equality (IQ and Social Stratification). (New York, NY: Harper and Row, 1974); Michael B. Katz, Class, Bureaucracy, and the Schools (The Illusion of Educational Change in America). (New York, NY: Praeger Publishers, 1971) and "The Origins of Public Education: A Reassessment" (Presidential Address, History of Education Society, Cambridge, MA, November, 1976). History of Education Quarterly, XVI (Winter, 1976), pp. 381-408; Joel Spring, The Sorting Machine (National Education Policy Since 1945). (New York, NY: David McKay Company, Inc., 1976); David Tyack, The One Best System (A History of American Urban Education). (Cambridge, MA: Harvard University Press, 1974) and "Pilgrim's Progress: Toward a Social History of the School Superintendency, 1860-1960," Harvard Educational Review, 16 (Fall, 1976), pp. 257-294.

[20] Ellwood Patterson Cubberley, The History of Education; Educational Practice and Progress Considered As a Phase of the Development and Spread of Western Civilization. (Boston, MA: Houghton Mifflin, 1948). See also, Lawrence A. Cremin, The Wonderful World of Ellwood Patterson Cubberley (An Essay on the Historiography of American Education). (New York: Bureau of Publications, Teachers, Columbia University, 1957).

School Reform Since A Nation at Risk

In 1983, claiming that "[i]f an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war,"[21] the *ad hoc* National Commission on Excellence in Education touched off a furious flurry of state and national committees and commissions to stem the "rising tide of mediocrity" allegedly threatening our future, "as a Nation and a people."[22] Although the Commission report clearly couched its call for educational change in the context of altered economic realities, and accurately forecast the economic shift to an information-based society,[23] in an environment of globalization,[24] the thrust of the testimony they took and the papers they commissioned, was traditional not futuristic. And though the Commission underscored our commitment to education to ensure our democratic society, re-emphasizing that "[a] high level of shared education is essential to a free, democratic society and to the fostering of a common culture, especially in a country that prides itself on pluralism and individual freedom,"[25] the numbers and notes were really records of productivity. Even though the report asserted "that the Japanese make automobiles more efficiently than Americans and have government subsidies for development and export," the message to the country, and, particularly, education was not economic disequilibrium, but educational ineffectiveness. Although the call for substantive educational reform was no surprise in the policy centers studying the equity-related changes of preceding decades, or to thoughtful researchers looking closely at schools, it caught the schools "flat-footed"; and the Report's nasty edge stung, and sent educators reeling.

For some time, a growing discontent had characterized much of America's view of schooling. The exigencies of equalizing educational opportunity had changed the face of public education, and an aging population found it hard to recognize schooling as they had known it -- assuming, of course, that the education from which they benefited, and which enabled them to lead the world in industrial development was the same education needed for a new generation growing up in post-industrial America. The political contention and consequent decisions equalizing school funding called attention to how schools were run, the communities who controlled them, and broader questions of their role, or centrality, in the lives of American youth. The sense that "anything counts" in education, accompanied social perceptions that "anything goes," and we, as a country, found it difficult to be sure about much, least of all the schooling of our children. The war in Vietnam raised questions about the might and moral fiber of America, and the "malaise" President Carter had

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[21] National Commission on Excellence in Education, A Nation At Risk, (Washington, DC: 1983), p. 5.

[22] Ibid.

[23] Ibid., p. 7: " . . . learning is the indispensable investment required for success in the 'information age' we are entering."

[24] Ibid., p. 6: "The world is indeed one global village. We live among determined, well-educated, and strongly motivated competitors. We compete with them for international standing and markets, not only with products but also with the ideas of our laboratories and neighborhood workshops."

[25] Op cit., quoting Thomas Jefferson: "I know no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them but to inform their discretion."

captured in the restless society of the post-sixties turbulence, the sense of discomfort, found easy expression in blaming the schools.

Some years later, as it gradually became apparent that the alarm sounded in A Nation at Risk, was about social and, especially, economic change, not school change, *per se*, the focus for reform shifted. Like a child's growth spurt -- a growing plumpness before shooting up -- American society was exploding forward in a development that is still redefining our work and play, and, of course, the education of our children. We were experiencing, literally, a profound paradigm shift economically, a change as enormous for our socioeconomic productivity and personal lives as the effects of the industrial revolution at the turn of the last century. Although the term "paradigm shift"[26] was overused, and abused, at the time, in the discovery of how best to change schools, its conceptual utility cannot be underestimated. Because once we comprehended the enormity and comprehensiveness of the changes we were undergoing, the critiques of schooling in the early nineteen eighties and the simplistic solutions initially latched on to, were transcended by thoughtful, purposive commitments to excellence in new educational environments.

As with the Sputnik launch, schools were a convenient scapegoat for America's inability to compete in international markets. But unlike the space race -- perceived inadequacy in our capacity for exploring, and dominating, our "frontiers" -- this non-competitiveness struck at the heart of American industry, as well as national pride. As the Report had identified, American automobiles were not competitive with Japan's in international markets. Joel Spring has pointed out[27] how unjustifiably education has been blamed for America's perceived lack of competitiveness in international markets, since a high school graduate's impact on the economy does not occur for seven to ten years following school completion. But, in the early nineteen eighties, no one really realized that the blame for American unease properly belonged to the American automobile industry and other industrial production centers -- soon a "rust belt" in the middle of Middle America. That the fault of our failure lay not in the classrooms of our country, but, instead, in inefficient factories, particularly those making that icon of our contemporary civilization, the American car.

Fortunately, for the quality of public and professional discussion about educational change, five thoughtful publications emerged almost simultaneously with the Report's release: John Goodlad's A Place Called School; Theodore Sizer's Horace's Compromise (The Dilemma of the American High School); Ernest Boyer and the Carnegie Commission for the Advancement of Teaching's High School (A Report on Secondary Education in America); Sara Lawrence Lightfoot's The Good High School (Portraits of Character and Culture); and Mortimer Adler's euphoniously titled The Paideia Proposal (An Educational

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[26] Increasingly, Thomas Kuhn's The Structure of Scientific Revolutions (Chicago, IL: University of Chicago Press, 1962, reprinted, 1996) was adverted to to help scholars, school people, and public leaders grasp the concept of paradigmatic change. Although the book was not for everyone, the notion of "paradigm shift" moved into public and professional discourse so the implications of major social and economic change could be imagined, discussed, and educational responses to it, determined. Similarly, James Gleick's Chaos (New York: Penguin Books, 1987), with its vivid pictures of emergent patterns from apparently random numeric activity, became a metaphor for this period of change and the anticipated, but not immediately apparent, "order" in the dislocations and contradictions experienced. While it was difficult to comprehend extraordinary change, this work lifted the level of conversation beyond specific change strategies in schools, and gave those thinking about school reform, a vision of what could be occurring in modern American society to encourage deeper thinking about what kind of education was necessary in a changed socio-economic order.

[27] Cf., Joel Spring's histories of American schooling as well as his papers and public presentations.

Manifesto).[28] These educational leaders and their books constituted an intellectual counterweight to the plethora of reform reports and the widespread "opinionizing" about school reform that seemed to come from every corner.

While the plethora of reform reports and recommendations that followed release of the Nation at Risk report specified certain changes to improve schooling, the anxiety the Report aroused made more sense in the larger context of paradigmatic change in American society and education. For which, both the demise of industrial productivity and educational reconstruction were central changes. The connection between the two was not clear for several years, however. We clung to the comfort of our largest economic engine even as we exported our factories and farmed out our labor in other countries. Although, for some time, we had been speaking of an approaching Information Age replacing a dying industrialism, we really had not prepared for the social and economic change it wrought, or its educational implications. It was not immediately apparent beneath all the school change initiatives undertaken through the mid- nineteen eighties, but we were already becoming an Information Society. And, not incidentally, we have not yet thought through the meaning of the socio-economic separation we are currently experiencing in the somewhat surprising simultaneous development of Information and Service sector economies -- and the educational implications of this dichotomous development.

It is quite clear that we are no longer an industrial society, no more than an agrarian one. And we cannot be content, because we are not well served, with out-moded schooling that does not meet the needs -- in school or society -- of the lives we now lead.

But schooling practices die hard. Even though less than three per cent of the American population is actively engaged in agriculture, and less than ten per cent actively engaged in industrial manufacturing, we still cling, in schooling, to an agrarian calendar and factory clock. We measure students' learning progress in age-graded years (even though we know children develop at different rates) -- with a summer "season" off for a harvest we no longer take in. Learning opportunities are organized in class "periods," signaled by a loud shop floor bell, and "effectiveness" in schooling is measured much like the "efficiency" experts charted it at the turn of the century, monitoring how rapidly factory workers could carry pig iron up an inclined plane.

To be fair to formalized education in this country, it is a very big ship to turn quickly in deep water. Just as many of the central cities in our old manufacturing centers found it hard to accept or adapt to the loss of manufacturing's centrality in our domestic life, so it is difficult to move away from the customs and practices that shaped us in our schooling experiences.[29] Even if we knew how; and, of course, we had no clue. Instead we protested and fought off the challenges and challengers to our lives as we knew them -- those of us in industrial centers, and those of us in education. But profound change was both inevitable and inexorable, as we have come to see in every detail of our daily life

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[28] See, John I. Goodlad, A Place Called School. (New York, NY: McGraw-Hill, 1984); Theodore Sizer, Horace's Compromise (The Dilemma of the American High School). (Boston, MA: Houghton-Mifflin, 1984); Ernest Boyer and the Carnegie Foundation for the Advancement of Teaching, High School (A Report on Secondary Education in America). (New York, NY: Harper and Row, 1983); Sara Lawrence Lightfoot, High School (Portraits in Character and Culture). (New York, NY: Basic Books, 1983); and Mortimer Adler, The Paideia Proposal (An Educational Manifesto). (New York, NY: McMillan, 1982), and, later, The Paideia Program (An Educational Syllabus). (New York, NY: McMillan, 1992).

[29] An attractive set of case studies of successful, new and changed companies, organized differently than the 20th century industrial model of American productivity, is described in Rosabeth Moss Kanter's The Changemasters. (New York, NY: Simon and Schuster, 1985).

-- from the ubiquity of Toyotas and Hyundais on our highways to internetworked computing and communication and the rapidly expanding e-commerce environment. Were Professor Commager still alive and writing today he might well have a name for this twenty year run-up to the next turn of a century. The word that comes to mind is from the great Latin American educator, Paulo Freire: "informaticization," the "information-ing" of our world -- economically and educationally.

Initially, legislators responded to the crisis in education by "tightening up" and "toughening up" existing educational practices.[30] For several years, states increased "time on task" for everything, as the Nation at Risk report recommended: more years of a particular kind of coursework (three years of English and the sciences became four; two years of math became three) and more requirements, with tougher evaluations, for graduation from high school.

Slowly it became apparent, however, that education was not well-served by "new wine in old wineskins" and the school reform conversation shifted from an array of tight, tough requirements to rethinking how we "kept" school itself.

This so-called "second wave" of reform focused first on "restructuring": literally, examining and reconceptualizing the organization of American schooling.

"Re-structuring" included rethinking the school day and year, and the way knowledge and instruction were organized inside schools, as well as what knowledge "counted" and why, and the allocations of time among disparate educational activities and professional responsibilities. In his massive study of schooling,[31] for example, John Goodlad had found that eighty per cent of classroom instruction was "frontal," whole-group teaching. A particularly insightful, and well-received book, Contradictions of Control[32] described how teachers "narrow" and "flatten" curriculum, doling out bits of knowledge and information, keeping students coming back for more. And, it should be noted, thereby maintaining, in their classrooms, a measure of control, in a work setting over which they had almost no control. It soon became professionally popular to talk about moving from being "the sage on the stage" to "the guide on the side"; to think of teachers as guiding and facilitating students' knowledge development, rather than "dispensing" quanta of information to be "regurgitated" by students on command. Different groupings of students, learning in collaboration with each other, working on projects together, even, shocking as it seemed at the time, "choosing" what they wanted to know, typified this "restructuring" period.

In the beginning, reformers relied on the highly bureaucratized, heirarchical administration of schools to make appropriate changes, counting on top-down directives to accomplish whatever was necessary. But school leaders did not know how to lead in a new, more collegial atmosphere -- one that threatened most teachers just as dramatically as those in charge. (Unionization and highly controlled management of most schools fostered a kind of infantilization among teachers, content to close the classroom door, and do what they

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[30] These largely cosmetic, and, likely, counter-productive, changes were described in Pamela Keating's invited paper presentation to the Council of Chief State School Officers Study Commission, 1987, with reference to Kenneth A. Sirotnik, "What You See Is What You Get -- Consistency, Persistency, and Mediocrity in Classrooms." (Harvard Educational Review, 53:1 (1983), pp. 16-31).

[31] The Study of Schooling formed the underpinnings of John Goodlad's highly acclaimed book, A Place Called School, (New York, NY: McGraw-Hill, 1984).

[32] Contradictions of Control, by Linda McNeil, a researcher at Rice University, is subtitled, revealingly, School Structure and School Knowledge, (New York, NY: Routledge, 1988).

were used to doing, rather than "shake up" a system in which they were markedly secure.) Soon, however, talk about "bottom-up" reform displaced strategies for "top-down" changes, and a concomitant "authoritarianism" among administrators, whether educators were ready or not. Decentralizing decisionmaking (and in some instances, dollars, as well), creating collaborative structures inside schools and with parents and the community, and, even, post-secondary institutions that prepare teachers, developed as schools opened up to the world outside. Technology was explored to reinvent the "structure" of learning, though few contemplated the meaning for schools in widespread Internet access and the learning resources afforded us in the new ether in which we now live.

Unfortunately, left to their own devices and internal discussions, it took awhile before teachers or administrators could imagine real change. The things on which they focused seemed trivial or beside-the-point, at first, but, in those schools where educators stuck with the effort to conceptualize genuine change, they soon moved on to school organization itself, questioning the role of principals, instructional organization and expectations, and the ordering of the school day and year, requesting more planning time, different student groupings, and eventually focusing on the central issues of curriculum and instruction.[33]

A number of "school reform" networks developed around the country under the guidance of thoughtful educational leaders, linking schools and teachers, and some university teacher educators, in continuing strategic collaboration for change.[34] Ted Sizer's national Coalition of Essential Schools, for example, focused on the central curricular and instructional activity of schools with the notion of the "student-as-worker." John Goodlad's national network of school-university partnerships was dedicated to the simultaneous renewal of schools and Schools and Colleges of Teacher Education, reasoning that to change only one was to frustrate change in the other, and eventually imperil both.

It soon became obvious, to educators and those who observed them, that it was impossible to reshape or replace any part of schooling without taking account of, and probably, changing, something else. It should be noted that the alternative -- still viable in many quarters -- was to give up on public schools as we know them, devising institutional alternatives, or privatizing them,[35] outside or inside, the system, letting market forces make for quality. Though the fear of "skimming" student talent and parental support, further worsening the plight of the worst schools, still gives pause. What was required, it seemed, was "systemic" change: a wholesale remaking, re-forming, of American education. But how to proceed? What to consider essential? How to gather consensus? It was a leadership issue, and the opportunity was grasped by a handful of governors who had staked out education as their political "turf."

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[33] An excellent description of this change process is Suzanne Soo Hoo's "School Renewal: Taking Responsibility for Providing an Education of Value," in John I. Goodlad and Pamela Keating, eds., Access to Knowledge (The Continuing Agenda for Our Nation's Schools), [revised edition] (New York, NY: The College Board, 1994), pp. 205-221.

[34] Cf., for example, John Goodlad's National Network for Educational Renewal in approximately one fourth of the states, Ted Sizer's Coalition of Essential Schools around the country; and Phil Schlechty's partnership work in Louisville, Kentucky.

[35] The most popular exposition of this idea at the time was John E. Chubb and Terry M. Moe's, Politics, Markets and America's Schools, (Washington, DC: The Brookings Institution, 1990). Also, see writing by Joe Nathan and Paul Peterson, particularly, Joe Nathan, ed., Public Schools By Choice, (St. Paul, MN: The Institute for Teaching and Learning, 1989). The most recent iterations of this strategic response, forcing change by changing a specific school, or creating a public alternative, are charter schools. The first of these efforts in Alaska is Chinook Charter School in Fairbanks. (Contact Terri Austin for information.)

Gubernatorial leadership in education is a relatively recent phenomenon. Through the equity and equalization period of preceding decades, courts, and then, legislatures, had taken the lead. Indeed, in the first flurry of post-Nation at Risk reform activity, state legislatures, increasingly acting like each state's over-arching school board, legislated the structural changes thought to solve the public problem. The Chief State School Officers were largely silent (except for two, who have continued to articulate meaningful change strategies, inside the group and subsequently). It should be remembered, though, that more than two thirds of the Chiefs are appointed by their state's Governor, so it was logical for the Governors to pick up the mantel of leadership. First, it was a perfect opportunity to use the "bully pulpit" with no control over -- or responsibility for -- the outcome. That is, Governors could inveigh against the sorry state of education, and propose all manner of remedies -- themselves, or through their Chief State School Officers. But state legislatures controlled the purse strings, and set the funding priorities. And no amount of gubernatorial oration would actually bring about educational change. Although, in some instances, members of the "blue ribbon committees" that laid out the states' school reform plans, were appointed by their state's governor, whether making recommendations to the legislature, or creating and carrying forward a public agenda for reform.

A set of state governors seized the opportunity to define their leadership in a new way in this public arena: Bill Clinton in Arkansas, Richard Riley in South Carolina, Lamar Alexander in Tennessee, John Ashcroft in Missouri, Madeleine Kunin in Vermont, Bill Honig in California, and, later, through the National Education Goals Panel, Roy Romer, Colorado; Booth Gardner, Washington; Birch Baye, Indiana; and Jock McKiernan, Maine. They used not only the forums of their respective state offices, but also their own National Governors' Association, and the good offices of the Education Commission of the States, to keep the school reform discussion alive.

These "Education Governors" even compelled the President to meet with, and act with, them -- forty eight of the fifty -- gathered, in 1989, under the leadership of then- NGA president, Arkansas Governor Clinton, in an Education summit in Charlottesville, Virginia. Their purpose was to come to agreement on the goals they held for American education, an agreement to help the country move forward toward realizing the educational excellence we wanted. The political compromise that resulted identified six Goals on which to work together to realize our hopes for American education. These Goals were as dissimilar as "being first in the world in math and science," and "ensuring that all children start school ready to learn"; making sure that Americans could count on "safe schools"; that American students would master challenging content; and increasing the number of those who graduate from secondary schools; to expecting that all American adults "will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship."[16] The bi-partisan and autonomous National Education Goals Panel, put in place to support America's achievement of the Goals, wisely, with a set of national expert Working Groups, each focused on a single Goal, interpreted each one in relation to real school reform, eventually articulating standards for achieving the Goals and anticipating benchmarking progress for public reporting.

Meanwhile, responding to the plethora of reform reports and recommendations of the mid-nineteen eighties, and a developing notion of a need for a plan for reaching the national goals for Education, national disciplinary and professional associations weighed-in with recommendations for improved and expanded student learning. This initially parochial

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[16] (In 1994, Congress added two more in passing the *Goals 2000* legislation, stipulating parental involvement in education and requiring high quality professional development for American teachers.)

effort yielded a vibrant conversation about what all students should know, and, eventually, what all students should know and be able to do. This standard-setting in the academic disciplines was led by the National Council of Teachers of Mathematics[37] whose standards for mathematics teaching and learning are arguably still the best we have in any subject area. Not only are the NCTM standards conceptually rigorous and intellectually cumulative, they are thoughtfully arranged in developmental "bands," taking account of students' dissimilar rates of maturation, while removing the "age-gradedness" still defining the lock-step learning that developed during the industrialization of the early part of this century. And, they are explicitly pedagogical, designed to shape teaching to ensure desired learning. Eventually, student learning standards were set for all subjects normally covered in elementary and secondary schools, and more.

The "Education Governors" who had led the organization of the Charlottesville summit, and participated in the organization and work of the National Education Goals Panel, benefited directly from amplified and extended national attention to Education reform with the Clinton Administration's *Goals 2000: Educate America Act*.[38] This important piece of legislation seemed to be a somewhat seamless segue from the Bush to the Clinton Administration in highlighting the need for and influencing development of organized education reform; even the titles of each Administration's proposed education reform legislation were similar. The law, when passed by Congress in 1994, was most markedly a wholesale devolution of responsibility for reform to the states where reform had first been initiated. But unlike the early "toughening up" agenda, the Governors' agreement with the Bush Administration in the summit at Charlottesville, on a set of National Education Goals, became, with *Goals 2000*, a program for substantive state-level investments in setting standards for student learning as a mechanism for reaching the National Goals for Education.[39]

This new development direction undertook fundamental reform of curriculum and instruction requiring first a full articulation of what all students needed to know. States' standard-setting supported by *Goals 2000* money was, specifically, an investment in local control of education. No subjects or standards were prescribed or proscribed, beyond the national Goal commitment that " . . . all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography. . . ."[40] Funds allocated on a population formula were extremely flexible. States simply needed to develop a plan for content and performance standards, and assessments aligned with their standards. The compact created at Charlottesville was moved from the federal to the state level with federal funds supporting state-level change.

The initial time table for successive years of *Goals 2000* support to the states accurately anticipated the pace of change -- slow -- in organizing this standard-setting across the states. Some states readily adjusted on-going state-level reforms under standard-setting rubrics. Others wrapped *Goals 2000* money around already articulated expectations for

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[37] National Council of Teachers of Mathematics, Curriculum and Evaluation Standards for School Mathematics, and Professional Standards for Teaching Mathematics. (Reston, VA: NCTM, 1987).

[38] Public Law 103-227, 103rd Congress, March 31, 1994.

[39] For the first recommendations regarding criteria and processes for content and performance standards, see the 1993 Report of the Goals 3 and 4 Technical Planning Group on the Review of Education Standards, to the National Education Goals Panel, Promises to Keep: Creating High Standards for American Students..

[40] P. L. 103-227, Title I, Section 102, "National Education Goals," B (3), "Student Achievement And Citizenship."

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student learning. Still others, like Alaska, began the articulation when the funds for specific standards-setting became available. (In contrast, California, in sync with the national subject-matter standards-setting, began setting student performance expectations in the late nineteen-eighties, and had already experienced wrenching public "political correctness" wars in the social studies well before many states had even begun their standards-setting processes.[41] Now that states' standards are models against which other states can benchmark their own work.[42])

Participation in Goals 2000-supported standard-setting was voluntary, and no sanctions were imposed in any other arena of federal assistance, relative to whether or not states chose to engage in this educational reform initiative. Some states chose not to accept federal funds for educational standards, when they first became available, for reasons as diverse as their respective politics. In Alabama and Montana, a compromise plan provides for funds to flow through to local districts, without state-level participation in standards-setting.[43] Only one state is still a "hold out" against yielding to the standards-setting thrust of reform: Iowa, which continues to rely solely on the Iowa Test of Basic Skills for assurances of students' learning. And states have spent their allocations variously with quite different decisions for determining standards for the state's students' learning, and the follow-on assessments for measuring achievement.

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[41] In addition to local and national newspaper coverage, see Catherine Cornbleth and Dexter Waugh, The Great Speckled Bird (Multicultural Politics and Education Policymaking). (New York, NY: St. Martin's Press, 1995).

[42] Since 1995, the American Federation of Teachers has published Making Standards Matter (An Annual Fifty-state Report on Efforts To Raise Academic Standards). (Washington, DC: AFT, 1995, 1996, 1997, 1998). In the Executive Summary for 1997, the authors describe states' progress in developing high quality standards, and the extent to which those standards "drive major changes in the schools." They continue: "We first issued Making Standards Matter in the summer of 1995. The good news then was that nearly every state was working to set common academic standards for their students. But good intentions were not necessarily resulting in strong standards. We saw a lot of activity between 1995 and 1996, but the quality of the standards did not significantly improve in the states. We made it clear in our report last year that most states had more work to do to strengthen their standards, and we cautioned that the failure of states to attach rewards, consequences, and interventions to their standards would severely diminish their effectiveness." They then "reveal those states that have made the greatest progress and those that still have more work to do." (p. iv) In their analysis only seventeen of the fifty states are shown as having high "Academic Standards." That is, "the state [is] delivering what students should know and be able to do in the core subjects," and "the standards are clear, specific, and grounded in content." (pp. 24 and 25) In 1998, the AFT report was more specific, comparing the clarity, specificity and content-groundedness of each of the four core standards (English, Math, Science, and Social Studies) at each level (elementary, middle, and high school). In this, most recent, cross-states comparison, only California of those strong standards states identified the previous year, scored in all four subjects at all three levels. (pp. 10-11)

[43] Mark Pitsch, "Mont. Lawmakers Reject Goals 2000 as Other States Sign On," *Education Week*, (April 19, 1995), p. 19. [An accompanying map displays states' participation in *Goals 2000* standards-setting.]

Education Standards

Setting standards in Education, though a logical next step, was not a linear development to operationalize national goals, as implied in subsequent coverage of the Charlottesville summit, nor, for all states, a direct result of the Clinton Administration's *Goals 2000* legislation. Rather, the systemic reform conversation, over several years, which had generated the concern about the kind of schools we wanted, led to genuine questions about what schools should be doing to support students' learning. Education reform discussions had moved through layered attention to the structure and organization of schools for nearly a decade, and, finally, came to a central definition of educational responsibility.

School reform had undergone a transformation -- from requiring and prescribing to genuinely probing purposes and practices at the heart of the educational process. The public purpose of American schooling was redefined in particularly personal, even individualistic terms. However naive it sounds now, the central question was sincere: just what *are* students supposed to know and be able to do? Schools may do many things, and stand for much with different people, but, American community leaders and educators kept asking, what *must* they do? Questions about what must be known, and how we will know it is known, have dominated the school reform discussion ever since.

In the context of parental, community and professional concerns about what students should know and be able to do, pointing to textbook series, or describing disparate classroom activities, or even citing numerous examples of professional good will and exemplary graduates was not good enough. Throughout this period of reform, one rock, or fundament, after another had been turned over, and too much in Education seemed without purpose or justification. Now, no matter how good schools and teachers might be, everyone wanted to know how students were being prepared for the lives they would lead. Education's inability to answer clearly what students had to know and be able to do was probably a bigger shock to our education system and collective wisdom than the initial barrage of attacks on public schools. We were not at a loss for answers -- for there were innumerable ideas about what we needed and might do, but we knew we needed *an* answer. We had come too far in seriously opening ourselves to re-forming schools -- questioning every aspect of their organization -- to be content, any longer, with "anything goes." And so, in a diverse, and, now, agitated, society, with the public increasingly concerned, and the profession seemingly unsure, we began, in most states, the bumptious processes of setting standards for student learning.[44]

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[44] In a timely *Education Week* article (April 12, 1995) Lynn Olson reports on a survey of state's standards-setting, "Standards: Standards Times 50." (http://www.edweek.org/ew/vol-14/) At that time, nearly a year after the passage of PL 103-227, the landmark *Goals 2000* legislation, forty six states had applied for federal grants to support development of content standards and a related system of assessments. According to the *Education Week* survey, "31 states began work on what they identify as content standards in 1991 or later. Of those, most [were] still drafting or reviewing their standards." Since 1992," the article continued, "the U.S. Education Department has spent more than $24 million to support the development of curriculum frameworks and content standards in 30 states. Standards-setting in the states 'was not on the radar screen very strongly four or five years ago,' [said] Lauren B. Resnick, the co-director of the New Standards project. 'The enormous effort going into setting content standards state by state now was not foreseen when the national efforts began.' For years, states have had curriculum guidelines or vision statements about what students should learn. But these have ranged from exhaustive lists of objectives to

What a novel notion, it seems retrospectively -- to come to common agreement on what everyone needs to know.[45] And standards? We should have high standards, of course; how had we not thought of it before? As one, everyone seemed to "get it" simultaneously. High standards mean excellence; and, we knew we wanted excellence. After all, "mediocrity" had been identified as the problem, the public threat.[46]

First the academic disciplines had stepped forward. The National Council of Teachers of Mathematics had begun well before any others; indeed, with their work on mathematics standards, they helped shape the national conversation about standards-setting. With the characteristic parsimony and clarity of their academic discipline itself, math educators had laid out what students should know mathematically, in broad developmental bands. Unlike age-graded classroom learning, and textbook series' scope-and sequence-study, the mathematics community organized concepts incrementally, building ideas on other ideas, and articulating a knowledge progression of the chief understandings and important tenets of mathematical reasoning and problem-solving. Then, not surprisingly for a group of educators, they set standards for the math teachers, too. Indeed, the NCTM standards have been faulted for being standards for teaching rather than for students' learning.[47] That is,

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vague exhortations for student performance. In the mid-1980's California became the first state to replace these minimum requirements with a new set of curriculum frameworks that described what students should learn in each subject at each grade level. The frameworks help guide the state's testing system, professional-development efforts, and textbook selection. In the early 1990's, states like Vermont and Maine asked citizens to help draft a 'common core of learning' for students. Neither as specific as a curriculum framework nor as sweeping as a vision statement, these documents spell[ed] out what students should know when they leave school and the skills and attitudes they should take with them. Typically, they list[ed] broad goals and objectives that are not specific to an academic discipline. In some states, however, such documents provide the foundation for today's standards-setting efforts. In her book National Standards in American Education: A Citizen's Guide, historian Diane Ravitch identifies three features of the content standards that many states are now developing: They are clear and measurable; they focus on cognitive learning, not affective traits; and they are usually based on traditional academic disciplines. Based on [the *Education Week* interviews] three other things distinguish the . . . spate of activity at the state level. One [was] the extensive consensus-building that some states have engaged in to set standards. The second [was] the attempt by states like California to use the standards to drive other parts of the system, commonly known as "standards-based reform." The third [was] the focus on what students should know and be able to do rather than on what teachers should teach." (pp. 1 and 2, of 10)

See also, Lynn Olson, "Rating the Standards." *Education Week*. (January 11, 1999), [reproduced separately].

An earlier, simpler *Education Week* "guide to national efforts to set subject-matter standards," (June 16, 1993), p. 19, is instructive, as well.

[45] For a sense of states' efforts prior to this developing commitment to consensus about what students should know, see Alex Medlar's Examples and Summaries of State Initiatives To Develop Goals, Standards and Outcomes, (Denver, CO: Education Commission of the States, May, 1994). In the *Introduction*, he accurately observes that the "shift in focus" is "a shift from inputs to outcomes. Rather than designing an education system around what students receive during their education, performance-based systems center on what students come to know and are able to do because of their education. Inputs, such as how many hours each day and how many days each year are spent in class, or how many courses in a specific topic are attended, are no longer the measure of a student's progress in performance-based systems. Instead, students must demonstrate that they have mastered the materials they were intended to learn." (p. 1)

[46] A Nation at Risk, p. 5.

[47] Chester E. Finn, Jr., Michael J. Petrilli, and Gregg Vanourek, The State of State Standards, (Washington DC: The Thomas B. Fordham Foundation, 1998), p. 12, argue, instead, for setting states'

they focus less on what students must know, and more on what teachers must teach. Perhaps math educators may be merely more prescient than the other subject area educators; because, in ordering their knowledge for educating, they have linked teaching expectations to learning expectations, and placed the accountability burden where it properly -- as we are only now coming to see -- belongs. They made teachers responsible to teach what they agree students need to know. Only recently, having flailed around in issues of assessing students' learning, is the rest of Education beginning to see how important it is that teachers are able to teach what we believe students must know and be able to do.

But before exploring essential pedagogical knowledge for student learning, in core subject areas and across the states, it is necessary, for a full understanding of Education standards, to appreciate the political consensus and will that have shaped their development, and supported their institutionalization. While many fine, and formative school reform initiatives and activities, and even long-term improvement relationships, have enriched and improved education, prior to and during this reform period, none has captured all the relevant constituencies, for coordinated, sustained effort, as has the standards movement. In part, it may be that every political and professional sector felt the agitation and concern that the restructuring and systemic improvement attentions addressed, raising essential questions about what was important. Certainly the question of "what" students "should know and be able to do" was heard across education and the political venues for critiquing and supporting it. It was almost a colloquialism -- branding the question as too banal or basic for words -- before standards-setting processes were simultaneously started in knowledge areas and supported in political processes.

Separate and shared interests were readily apparent. Indeed the seeming "triangulation" of the separate spheres of knowledge and politics, with schooling purposes, supported the vibrancy of the standards-setting work.

In political leadership, the "Education Governors" held out an opportunity for more extensive gubernatorial political visibility and proximate gain. The summit in Charlottesville pulled in presidential politics, and, with development of the National Education Goals Panel, sealed the national, bi-partisan commitment to educational improvement.

A new openness about essential elements of education emerged, "educating" all Americans about the knowledge available to us to be known. Curricular accrual, and the inherently political nature of American education, over two centuries of varied social and economic experience, had blurred boundaries between essential and peripheral or topically specific knowledge. Schooled a certain, common, way, few Americans questioned their own or their children's education. And schools seldom have had an incentive for "off-loading" anything -- much to the chagrin of the teachers who feel they must "fit" too much into the highly organized "industrial" production-oriented school day. Instead, schools were often provided funds for the "add-ons" that littered the curriculum. (The expansion of categorical, or targeted, education programs emerging since the Great Society initiatives of the 1960s were summarily erased by the Reagan Administration in the Education Consolidation and Improvement Act of 1981.)[48] Very few educators, parents, or interested

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standards focused on "core knowledge and essential skills" that "leave the teaching techniques to the schools . . . ."

[48] The Education Consolidation and Improvement Act of 1981 was the landmark legislation of the new Reagan Administration, consolidating three dozen categorical -- or program-specific -- grants programs, exempting Title I, reducing remaining federal allocations by approximately one third, and sending the money directly to the states as "block grants," that is, largely, "pass through" funds for local education agencies. (Only 2 per cent of the money could be retained at the state level, and there was no provision for

members of the public, questioned, then, or still, the central k-12 curriculum itself; if asked, most likely would claim "we've always" done it a certain way. American education, like American society, is, however, relative to other countries, quite "new," and still developing. And, as everyone seemed to learn in this period of substantive educational reform, change (and fast-paced change) is the only "constant"; to "stand still" is to "regress."[49]

While it is deeply discomfiting to consider, or re-consider, curricular commitments, it is as necessary as cleaning out closets.[50] From the "three R's" and the common schools developments of the eighteenth and nineteenth centuries to sophisticated computer-mediated information communications today is an enormous knowledge progression. And, even though a great deal of intellectual, academic and instructional work has been invested in this period of standard-setting for education, we have not yet fully comprehended, or even conceptualized, appropriate responses to the logical consequences of, or the social and educational changes following from, the standards-setting in which we have engaged. Certainly, we need to do more, differently, if we are to make sure we have the education we think we need.

Two key aspects of the *Goals 2000* legislation were dropped during Congressional consideration of the proposed bill. Both of which haunt subsequent standards-setting. The first was a stipulation for a "certifying" body, some *a priori* review of states' standards. Without some agreed-upon oversight or evaluation, we have no knowledge of the relative worth of any of these standards, which is certainly an acceptable attitude for states if localism or regionalism is a widely held value. But provincialism has a price: and if some states, in complete freedom, consign their citizens to relative ignorance, or insufficient education, or just low-level learning, they have not served them well, even if they have acted out of a pure commitment to local control of schooling. A counterweight to unfettered and inept standards-setting in the states is the influence of disciplinary standards set in core subjects, which appear to have been adverted to, if not relied on, in most states. The benchmarking standards activity of ACHIEVE, INC. since the second Education summit is a clear effort to ensure high quality within and across states.

The second, more troublesome, extraction was of anticipated "opportunity to learn standards": an effort to ensure that states could, and would, provide what students needed to learn what states felt they should know, and which the proposed legislation required states to test for. The essential reform of *Goals 2000* was a shift from educational inputs to learning outcomes or results. Basic issues of fairness argue for assuring students' opportunities to learn what they must know. Can we hold students' accountable for learning what teachers are unprepared to teach them, for example? Ought schools do whatever is needed so that all students' are learning what they need to know?

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funds for the intermediate agencies that had previously derived considerable support from categorical funds, providing coordinated services delivery across local school districts.

[49] In addition to Rosabeth Moss Kanter's excellent description of leading-edge American companies and their adaptiveness to change, cited earlier, good points about managing change in information organizations can be found in Chapter 2 of Harlan Cleveland's The Knowledge Executive, (New York, NY: Simon and Schuster, 1985). To grasp the rapidity of change in American society, and education, two questions might be: When did you "connect" to the Internet simply for e-mail; and when was your most recent Web purchase?

[50] For an excellent -- humorous and profound -- treatment of the subject of curricular accrual and social and economic change, see J. Abner Peddiwell's The Saber Tooth Curriculum (Including Other Lectures on the History of Paleolithic Education). (New York, NY: Teachers College Press, 1961).

Certainly, the national standards-setting in core subject areas was a temporal phenomenon. While the work of establishing essential learnings is necessarily -- perforce of imperfect understanding and continuing development -- never complete, it is difficult to imagine going over that same vast ground again. Likely all standards-based knowledge articulation will continue to invite changes and reconceptualizations, and should. But the work of the knowledge groups is essentially over. The work of the states is not. And, still more work is needed, nationally, to ensure fair treatment of all students across the states, and make sure that states have risen to a new level of responsibility in ensuring necessary education to all our citizens.

Standards-Setting in Core Subjects

The standard-setting decade, 1987-1997, is bracketed by exemplary efforts in the two subjects about which we were most concerned at the beginning of the school reform discussion: math and science. In 1987, the National Council of Teachers of Mathematics published both Curriculum and Evaluation Standards for School Mathematics and Professional Standards for Teaching Mathematics.[51] Ten years later, the American Association for the Advancement of Science's Project 2061, which had previously published k-12 science standards in Science for All Americans in 1990,[52] brought out a guide for teachers (with accompanying cd), Resources for Science Literacy (Professional Development).[53] Not only had deficiencies in mathematics and science education been singled out for blame in the early reform attacks on schools, but, the original National Education Goals included a primary focus on these two subjects.

Although Goal 3 calls for improved student achievement across the curriculum --

> By the year 2000, American students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.[54]

Goal 5 (previously Goal 4), however, specified that

> By the year 2000, U.S. students will be first in the world in science and mathematics achievement.[55]

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[51] National Council for the Teaching of Mathematics. Curriculum and Evaluation Standards for School Mathematics. (Reston, VA: NCTM, 1987) and Professional Standards for Teaching Mathematics. (Reston, VA: NCTM, 1987).

[52] Project 2061, American Association for the Advancement of Science. Science for All Americans. (New York, NY: Oxford University Press, 1990).

[53] Project 2061, American Association for the Advancement of Science. Resources for Science Literacy (Professional Development). (New York, NY: Oxford University Press, 1997).

[54] National Education Goals Panel. The National Education Goals Report. Building a Nation of Learners, 1995. (Washington, DC: NEGP, 1995), p. 11.

[55] Ibid., p. 12.

The concern about the quality of American students' mathematics and science knowledge, the focus of much of *A Nation at Risk*'s alarm, was, throughout this period of reform, the primary attention. Fortunately, education was well-served by the work that developed.

The standards in mathematics stand above all the rest emanating from disciplinary groups for their form as well as content, for the ideas they articulate and the pedagogical excellence they impel. But the mathematics community deserves credit not only for the early and full development of standards in mathematics, but for the purposeful ways in which they have been advanced. In both major publications for mathematics teachers, Arithmetic Teacher and The Mathematics Teacher, through the mid-1990's, special series of articles were published to highlight, explain, and apply aspects of the NCTM standards.[56] These thoughtful efforts to educate about the mathematics standards, and assist teachers is a fine professional development initiative, and highlights the importance of active and continuing work to ensure that this transformation of learning is realized as hoped.[57]

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[56] In the Arithmetic Teacher series, "Implementing the Standards," for example, can be found articles covering different topics, such as Susan N. Friel, "The Statistics Standards in K-8 Mathematics," (October, 1990, pp. 35-39); Paul R. Trafton and Judith S. Zawojewski, "Meanings of Operations," (November, 1990, pp. 18-22); Francis (Skip) Fennell, "Probability," (December, 1990, pp. 18-22); Dan Dolan, "Making Connections in Mathematics," (February, 1991, pp. 57-60; and Lorna J. Morrow, "Geometry Through the Standards," (April, 1991, pp. 21-25).

And, in the same publication's subsequent series "Implementing the *Professional Standards for Teaching Mathematics*," are various pieces like Deborah Loewenberg Ball, "What's All This Talk about Discourse"?" (November, 1991, pp. 44-48); Carolyn A. Maher with Amy M. Martino, "Teachers Building on Students' Thinking," (March, 1992, pp. 32-37) and with Robert B. Davis and Alice Alston, "Teachers Paying Attention to Student's Thinking (May, 1992, pp. 32-37); Nancy Nesbitt Vace, "Questionning in the Mathematics Classroom," (October, 1993, pp. 88-91), "Teaching and Learning Mathematics through Classroom Discussion," (December, 1993, pp. 225-227), and "Planning for Instruction: Barriers to Mathematics Discussion," (February, 1994, pp. 339-341); as well as Jeane M. Joyner, "Linking Teaching, Learning, and Assessment," (May, 1994, pp. 550-552).

The Mathematics Teacher series on "Implementing the Curriculum and Evaluation Standards," included such varied articles as Claudia Carter, "Using Technology in Graphing," (February, 1992, pp. 118-120); Theresa Bagley and Catarina Gallenberger, "Assessing Students' Dispositions: Using Journals to Improve Students' Performance," (November, 1992, pp. 660-662); Robert Pacyga, "Making Connections by Using Molecular Models in Geometry," (January, 1994, pp. 43-46); and Joan Ferrini-Mundy and Loren Johnson, "Recognizing and Recording Reform in Mathematics: New Questions, Many Answers," (March, 1994, pp. 190-193).

In the series "Implementing the *Professional Standards for Teaching Mathematics*," in the same publication, are articles as diverse as Deborah Loewenberg Ball, "Improving Teaching, Not Standardizing It," (January, 1992, pp. 67-72); Peggy House, "Let the Mathematics-Science Connection Break the Mold in Teacher Preparation," (April, 1994, pp. 289-293); and Roberta Koss and Rick Marks, "The Teacher and Evaluation," (November, 1994, pp. 614-617).

And in The Mathematics Teacher series "Implementing the Assessment Standards for School Mathematics," see, for example, Vicki Kouba, "Self-Evaluation as an Act of Teaching," (May, 1994, pp. 354-358); Doug Clarke and Linda Wilson, "Valuing What We See," (October, 1994, pp. 542-545); and Harold Asturias, "Using Students' Portfolios to Assess Mathematical Understanding," (December, 1994, pp. 698-701).

[57] In a forum in Fairbanks two years ago, for example, featuring the Mathematics Standards, all four FNSBSD teacher-panelists, indicating a proximate realization of this hope, came with their own copy of the NCTM standards. Since the books are quite large, as well as expensive, the professional development attention that got those teachers to acquire those books is itself impressive.

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In the sciences, while the materials on science standards and the professional education of science teachers are conceptually and pedagogically valuable, they were not arrived at as seamlessly, or in such concert in the field. First, "science" is really several bodies of scientific knowledge which form essential secondary curricular areas of study in physics, chemistry, biology, and earth sciences. Though they are usually not taught in that order; in fact, just the opposite. Indeed, a recommendation from the scientific community at this time was the importance of reversing the order of their study in high school, beginning with physics and ending with earth sciences.

Unfortunately, initially, these separate sciences were unable to speak to the k-12 community with a single voice. Then two key scientific organizations strove to speak for the science education community. Finally, two years ago, when the American Association for the Advancement of Science published its materials for teachers, it listed the National Academy of Sciences' standards next to its own to show similarity and overlap. Separate "sets" of standards, however, belie the idea that all students will be learning what is "essential"; or, perhaps more importantly pedagogically, it begs a basic question of conceptual development, and the necessary "scaffolding" of knowledge for constructing more knowledge and including, or integrating, other information. On the other hand, it is a reminder that this standards-setting was designed to ensure American children would reach our country's goals for their learning[58] and was never conceived as a search for "absolutes."

Project 2061, the AAAS effort to ensure that science standards are met across the country and across levels of learning by the year 2061, when Halley's Comet reappears, has been diligent in getting accessible materials to teachers, and is engaged in thoughtful professional development activities in specific sites.

The third agreed-upon "core" subject for elementary and secondary education, along with science and mathematics, is English Language Arts.[59] Though, reportedly, an internally contentious process, little was written about difficulties in the discipline. In The State of State Standards, the former Assistant Secretary of the Office of Educational Research and Improvement, Chester Finn and his Fordham Foundation colleagues, however, disparage the work of the National Council of Teachers of English (NCTE) and International Reading Association (IRA) as a "travesty."[60] They claim that Department of Education support was withdrawn because the interim draft report "was devoid of anything resembling standards and ignored all the major issues it was charged with addressing," consisting "largely in platitudes or expressions of general 'principles'."[61] Although they acknowledge that "few state standards documents acknowledge the NCTE document" and most "show little or no

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[58] P. L. 103-227.

[59] The "subject" as identified by the National Council of Teachers of English and the International Reading Association, Standards for the English Language Arts, (Urbana, IL: NCTE and IRA, 1994).

[60] Finn, et al, 1998, pp. 13-14.

[61] Ibid., p. 13. "Begun in 1991 by the National Council of teachers of English (NCTE) and the International Reading Association, the project was de-funded by the U.S. Department of Education (after spending close to $2 million). The reason? The Department concluded that the interim draft report was devoid of anything resembling standards and ignored all the major issues it was charged with addressing. When the final document was unveiled in 1996, it was denounced by Michael Cohen, then a senior adviser to the Secretary of Education (and now a White House aide) [author's insertion: *now* the Assistant Secretary of Elementary and Secondary Education] and by the late Albert Shanker, president of the American Federation of Teachers."

direct influence," they, nonetheless, assert that "the educational philosophy mirrored in those principles to some degree underlies many state standards."[62]

The fourth "core" subject is loosely captured in "social studies," and in secondary schools replicates more directly the disciplinary subjects that contribute to this broad area: history, geography, principally, but also, economics and other subjects in the social sciences. In elementary schools, of course, it is simply "social studies." All of these subjects of study are enumerated in National Education Goal Three,[63] though different iterations of "core" subjects -- varying from four to eleven[64] -- array them differently. This subject area, combining these disparate, but related topics, serves as a necessary fundament for understanding American government and civic responsibilities, our democratic society, and our economic capitalism, as well as learning about the diverse peoples who comprise our country's pluralistic society and our world.

But it also draws the most fire, and fuels the biggest conflagrations over values. Social Studies standards have been a source of continuing controversy in several states, though the geography standards -- while taking several different forms -- nonetheless, in the opinion of one critic "turned out reasonably well."[65]

The arts are similarly diverse studies, but they lack a single national association or advocacy group for teachers in the arts comparable to the substantive support of groups of educators in mathematics, science, and English/language arts. Continuing community and constituent interest continues, however, and has ensured that the arts have not dropped from view in some subject groups' rush for recognition of their disciplinary knowledge.[66]

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[62] Ibid. The authors claim, however, that their perception is not a "product of direct influence by the national standards so much as an indication of the zeitgeist of the education profession with respect to English/language arts." (p. 13) To buttress their judgment, the authors note in the preceding page (p. 12), other "lightening rod" subjects, particularly history, finding "that most states avoided this problem, presenting history in a straightforward, balanced, and fair manner. But not all of them. . . . [citing, as one of two unfortunate examples] Alaska's standards, which ask students to watch 'films about the American West produced from the early to the late 20th century (e.g., Broken Arrow, Little Big Man, Dances with Wolves)' and 'analyze the images of Native Americans portrayed in the films.'" Though the authors warn only against the "impact on impressionable minds" of such "history-based" movies.

[63] See the full statement of Goal 3 quoted in preceding text at the beginning of the section on Standards-Setting in Core Subjects, as taken from the *Goals 2000: Educate America Act* in Title I, Section 102, "National Education Goals," (3) A, "Student Achievement and Citizenship."

[64] P. L. 103-227, *Goals 2000: Educate America Act*, repeats the Goal 3 expectation that all students will demonstrate competence in "English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography," though the AFT annual standards report and ACHIEVE, INC.'s benchmarking initiatives concentrate on the four core subjects: English, mathematics, science and social studies. The arts are well-represented in states' standards-setting. And many states have added standards in technology, health and wellness, and physical education. Some states separate, history, civics, government, and economics; others combine several subjects as social studies.

[65] Finn, 1998, p. 12.

[66] The venerable philosopher of American education, Professor Maxine Greene of Teachers College, Columbia, wrote about "The Arts and National Standards," early on in the standards-setting period. (The Educational Forum, 58 (Summer, 1994), pp. 391 and 400). In describing the importance of belonging to a community in order to internalize the standards, or norms, of that group, she draws on artists -- Leonard Bernstein in music, Edward Villella in dance, Elizabeth Bishop in poetry -- who in entering into a community of artistic expression, choose and develop critical capacities as a function of their choice of a normative environment. And she argues for full exploration of the variety of human knowing and expression.

Elbowing for consideration among the subject standards have been a number of "role" responsibilities in Education, evidently seeking to maintain their place in schools and colleges of Education along with subject matter methodology, psychology, and social context studies. While negligible in impact, their development does reveal an unfortunate unfamiliarity on the part of most professional educators about the purpose and development of students' learning standards. As the states have set their standards for students' learning and moved on to develop appropriate assessments, this interest in auxiliary standards-setting has diminished, but it is a reminder that educating about Education standards is still an important "role" for educators.

Standards-Setting in the States

The National Education Goals Panel was designed to ensure progress on reaching the National Education Goals agreed to at the initial Charlottesville summit. "In its first year, the Panel concluded, that to meaningfully measure progress on Goals 3 and 4, consideration should be given to creating national education standards that define what students should know and be able to do and to identifying and developing methods to assess students' success in meeting them."[67] And eventually, the National Council on Education, Standards and Testing was created to respond to political leaders' interest in national standards and assessment. "Congress charged the Council to advise on the desirability and feasibility of national standards and tests, and recommend long-term policies, structures, and the mechanisms for setting voluntary education standards and planning an appropriate system of tests."[68]

Over eight meetings in the latter half of 1991, "the Council concluded that high national standards tied to assessments are desirable,"[69] recommending, among other things, the development of national content and performance standards and assessments of the standards as an essential step in achieving the National Education Goals."[70] Claiming that "high national standards tied to assessments can create high expectations for all students and help to better target resources," the Council asserted that they are "critical to the Nation in three primary ways: to promote educational equity, to preserve democracy and enhance the civic culture, and to improve economic competitiveness. Further, national education standards would help to provide an increasingly diverse and mobile population with shared

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Although, in standards-setting in the arts, there is a caution about "performance" standards, since the term has a specific meaning in the arts. There is little need to clarify content and performance standards, because, while the Department of Education, the National Endowment for the Arts, and the National Endowment for the Humanities supported standards-setting for k-12 students in art, dance, music, and theater, (see, Debra Viadero, "Standards Seen as Step To Insuring Arts Education," *Education Week*, (March 17, 1993) http://www.edweek.org/ew/vol-12/), little was carried forward at the state level, where, arguably, the lock-step learning of the "seven-period" school day does not admit of all students' rich learning in the arts.

[67] "Raising Standards for American Education," (Report of the National Council on Education Standards and Testing), Executive Summary as Appendix D, Promises To Keep, Creating High Standards for American Students, Report to the National Education Goals Panel, (Goals 3 and 4 Technical Planning Group on the Review of Education Standards), Washington, DC: NEGP, November, 1993) p. D-56.

[68] Ibid.

[69] Ibid.

[70] Ibid., p. D-58.

values."[71] And, the Council claimed, "standards and assessments linked to the standards can become the cornerstone of the fundamental, systemic reform necessary to improve schools."[72]

In its multi-month work, the Council raised a set of polarities that shaped development of standards in U. S. education. The first, and, at the time, most focused on, was the nationalism/internationalism polarity accounting for the swings in much of our public policy over two centuries. The challenge to our economic hegemony internationally strongly influenced our initial school reform initiatives. And we felt impelled, as a country, to realize national interests in a well-educated and highly productive citizenry. This worry and resolve was manifest in the original Goal 4, now Goal 5[73] -- the only one to speak specifically to international comparison. And it underlay the important, subsequent inquiry into indicators by which progress and competitive position could be gauged.[74]

But, along the trajectory of reform, four other polarities raised in the Council's work could be said to describe and shape the development of standards and assessments, arguably even the most recent attention to the implications of standards and assessments for public, system accountability; that is, concern about teaching quality to assure desirable student achievement. The other four polarities -- nationalism/federalism, voluntary/mandatory, high expectations/minimal competencies and dynamic/static -- account for the shape of states' standards and continue to invite exploration.

Surprisingly, in light of subsequent development, the Council specified that "Standards must be national, not federal."[75] Indeed, in the Department of Education during the Reagan Administration, despite all the decentralization of fiscal and programmatic responsibilities in Education, efforts were made, in the Office of Educational Research and Improvement, to develop a national curriculum and calls were issued for a national test.[76] Since OERI is the Department of Education home of the National Center for Education Statistics, responsible for, among other things, the National Assessment of Education Progress, it made sense to locate the excellence initiative there.

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[71] Ibid., p. D-57.

[72] Ibid., p. D-58

[73] Previously cited at footnote 55.

[74] The best, current example of relevant international comparisons, is the TIMSS data currently in circulation. Interested educators may wish to access the TIMSS-Forum and TIMSS Resource Center homepage at http://www.rbs.org/eisenhower/resources/timss/forum.html.

See, also, J. de Lange, *Looking Through the TIMSS-Mirror from a Teaching Angle*, (Madison, WI: National Center for Improving Student Learning and Achievement in Mathematics and Science, 1997). And, additionally, the U. S. Department of Education, OERI and CPRE *Policy Brief*, What the Third International Mathematics and Science Study (TIMSS) Means for Systemic School Improvement. (Washington, DC: US Government Printing Office, 1998).

[75] "Raising Standards for American Education," p. D-57.

[76] Calls for "national" standards were, somewhat surprisingly, most clearly heard from more conservative voices such as Diane Ravitch ("A Citizen's Guide to Standards," The American School Board Journal, (February, 1995), pp. 35-39); Chester Finn, "National Standards: A Plan for Consensus," (Teachers College Record, 91 (Fall, 1989), pp. 3-9; and "Why We Need a National Education Policy," (The Education Digest, (April , 1990), pp. 8-10); as well as Christopher Cross ("Making Sense of the New Standards," The College Board Review, 171 (Spring, 1994), pp. 6-11; "The Standards Wars: Some Lessons Learned," *Education Week*, (October 21, 1998), pp. 32, 35; and, with Scott Joftus, "Stumping for Standards," *Education Week*, (April 9, 1997), pp. 41, 46).

The Clinton Administration's centerpiece education legislation, the *Goals 2000, Educate America Act*,[77] however, took the opposite route, funding state-level standard-setting, with important implications -- for the type and diversity of education standards across the states, as well as for how we as a country conceive of appropriate evaluation of students' educational achievement. President Clinton's relatively recent call for a national test seems to represent a policy reversal after the multi-year state-level investments of *Goals 2000*. But the proposed national test is consistent with the Council's original recommendations in 1991 for national standards and assessments tied to them.[78]

The Council called for standards that were voluntary, not mandatory. And, that is how they have been developed. In the case of subject areas, the most conceptually rich standards development has occurred in the national disciplinary and professional associations, where agreement was internal to those most knowledgeable in each subject, regardless of geographical place, and, as well, the professional association itself is a voluntary one, with no mechanism for imposition of ideas and agreements. Second, in the public standards-setting in states, no states were required to set standards, and a few refused to participate in standard-setting, *per se*. Some have simply re-phrased existing curricular expectations.

This very voluntariness created the possibility for dissimilarity of standards-setting across the states which has yet to be fully examined. The excision of the provision in the original proposed Goals 2000 legislation to certify states' standards, carries some unfortunate consequences in the context of assessment and accountability. Eliminating any coordination raises the very real issue of the nature of the national public interest in ensuring a high quality education to all children. Phrased differently, ought the federal government "intrude" in states -- as with civil rights -- to make certain no citizen receives an "inferior" education? (Or, given American mobility, and a constitutionally protected right to travel, does the country have cause to monitor educational quality within and across states as it regulates business, transportation, and the quality of goods?)

The chief result of the second, 1996, summit of governors, and representatives of each state's business community, with President Clinton, was the creation of a group, ACHIEVE, INC., to benchmark states' standards, in order to better understand their relative rigor, as well as the similarity of standards for student learning across the states. While an excellent idea, ACHIEVE's failure to meet its own timetable, and original commitments -- in part because of states' resistance to public comparisons -- undermines the excellence it was organized to ensure.

High expectations for all students have characterized the standard-setting in the disciplines, which are more inclusive, likely because of educators' and policymakers' experiences with Public Law 94-142,[79] and the subsequent inclusion commitments of previous decades. After years of attention to minimal competencies and minimum competency testing, (and despite a resurgence of interest in "direct instruction," particularly in new testing environments), a hallmark of standards-setting has been the essentially democratic belief that whatever standards are agreed upon, they must obtain for all students. Since we compel school attendance, these expectations for learning are extremely serious in their application to all students. An unforeseen, and unfortunate, result of setting high

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77 P. L. 103-227.

78 "Raising Standards for American Education," p. D-57.

79 The national assurance that all children will have an "equal and appropriate education," is a function of P. L. 94-142, which conditionned the development of special education two decades ago, and fosters inclusion still.

standards, however, has been that, as we have come to develop the high stakes assessments we wanted to accompany high standards, some states have developed the equivalent of "seat time certificates" for students who have not mastered the expected level of material, who cannot "test" at the level of our expectations for all students. Regrettably, Alaska, is one of those. When we offer certificates of mastery along with certificates for, simply, "attendance," we undermine the public commitment to excellence embodied in states' standards themselves. Is high quality learning just "value-added" or is it essential for all citizens in a democratic society? And if students are not benefiting -- if they are not learning -- then who is to blame? And what is our corporate responsibility for results?

Finally, agreed-upon standards, are intrinsically dynamic because they are open to modification and change, and have been set in an atmosphere that is extremely dynamic. Their applications, in the schools and classrooms of the states, and their implications and exigencies for how we prepare teachers and what we expect of them, as well as the measures we are developing to assure ourselves of excellence in education, is an exceedingly fluid environment. But that very dynamism makes performance judgments somewhat problematic. We need to examine progress and gauge mastery, but much work remains to capture the dynamic we have put in place. This dynamism, definitionally, incorporates a recognition of individual differences, certainly, and, necessarily, disabilities; a range of teaching competence; the structures and "dailiness"[80] of schooling environments; and the reality of political change. Most states' standards represent agreements about requisite student learning, but do not address the means of achieving them. The dynamic of their achievement describes the heart of education -- the teaching and learning, leading and inquiring, thinking and doing -- that captures the dynamism of education itself. And that is the challenge for all educators.

A central feature of the support and "sticking power" of standards is the bi-partisan, deeply democratic ways in which they have been developed -- in Alaska and across the states. Standards in education are not ephemeral, nor a "band wagon" akin to other minor changes in American education this century. They represent informed political will in a new way -- both ideal and practical. That is, for the first time, this country has conceptualized what we as a people think it important that we all know. Not *that* we should be educated (as with the Common School Movement last century), but what we must be educated about, and how best to achieve the learning we expect.

Regardless of dichotomous tensions, disciplinary and states' standards set over the past ten years have not been revisited or revised. But that does not mean that they will not, or cannot, be. Their very voluntariness and the unique political processes of their development make them vulnerable to enlightened change as well as political tampering. To maintain the fluidity and flexibility we need, educationally, we give up extraordinary control, or rigidity. Examining our progress -- individually and together, at varying levels of performance and productivity -- must continually reshape our educational expectations and the confirmation that we are indeed progressing as we wish to do. Continually reflecting on and reevaluating performance and productivity, and the policies that support achievement and progress, will assure us of the dynamism we seek in the standards we have set for an education of value.

Content standards developed in most states closely follow the subject matter learning expectations set by the disciplinary associations nationally. States, however, defined learning expectations for students variously, depending on particular states' interests or perspectives, the orientations of the individual state departments of Education; and the work of the diversely assembled groups defining standards in each state. Content

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[80] A term used often by Ann Lieberman to describe schooling reality and regularity.

standards focus on "what students need to know." Performance standards capture "what students need to be able to do" -- what constitutes adequacy.

While expected levels of performance occupied many standards-setting groups, most concentrated on "what" students need to know, necessary content knowledge, with comparatively little attention to how states could satisfy themselves that students did, indeed, know what was expected of them. "Opportunity to learn" standards, however -- assurances that the appropriate circumstances and conditions for learning would be provided -- were not obviously matters of concern. And ensuring that the articulated content standards would be taught in meaningful and reliable ways supported development of curriculum frameworks in a number of states.

Although a few states appear to have understood, early on, the value of comparing student performance and achievement, in meeting and mastering content standards, and, therefore, the importance of states' assessments of students' learning, the focus of most states' standards-setting was to get agreement on what students needed to know, with some attention to performance, or sufficiency, and with varying degrees of awareness of, or accommodation to, the curricular changes for making necessary knowledge available to students.

Virtually no state has linked students' content learning and expectations for performance to what one researcher termed, "school delivery standards."[81] And only a couple of states -- Alaska being one -- set specific standards for teachers. This absence of attention to instructional, or "delivery," expectations, particularly in the context of more rigorous assessment, is the most striking lacuna in the standards reform movement.

It is well to remember, however, that there is no national authority for Education; states are specifically charged -- usually in their state constitutions and charters -- with responsibility for providing and supporting schools. And while the reservation of this power to the states preserves state autonomy in Education from the federal government, it usually does not translate to state-level authoritarianism in education practice. That is, states traditionally license teachers to teach, but rely on teacher preparation programs for the academic and pedagogical preparation of prospective teachers. In k-12 education the state sets broad expectations for attendance and subjects of study, that is, a certain number of days of schooling, or a specific number of years of learning specific subject matter. But, beyond textbook adoptions, curriculum and instruction decisions are customarily made within districts, and educators in schools and classrooms enjoy considerable discretion and autonomy.

Local districts and teachers in schools and classrooms decide how a subject will be taught and define expected student learning. Indeed, state standards refresh the historic idea of state control of schooling, essentially creating new public accountability for results in education, but without prescriptive determination of curriculum and instruction. Teachers are both free as well as responsible for selecting the best means of instruction to ensure that the students entrusted to them learn what is required to meet the state standards, the public expectations for performance.

How, then, will we measure students' standards-based learning, and in what ways can we gauge whether prospective teachers can prepare students to meet state-set standards? Clearly, all teachers must be able teach students so they are able to meet public expectations

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[81] Andrew C. Porter, "School Delivery Standards," Educational Researcher, (June-July, 1993), pp. 24-30.

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for their learning. Similarly significant, it is necessary to develop assessments that accurately and adequately measure the learning we have specified.

To the degree that Americans take standards seriously, standards will be, necessarily, of high quality, consistent with the American experimental and exploratory temperament, as well as with our economic priorities. Educators and the public will require assessments that capture real learning, incorporating the most modern knowledge about individual differences in knowing and doing. And we, as a society, will expect that teachers know appropriate subject matter sufficient to teaching others, and can demonstrate a pedagogical repertoire appropriate to the diverse learning of American students.

Assessment and Accountability

As standards-setting was underway across the states -- that is, when each state had begun determining what it is that all students there must know and be able to do -- the school reform conversation shifted to one of assessment and accountability. How would we know what students know and can do? And, following on how we construed students meeting the standards we had set, what would determine sufficiency, what would "count," or "be enough," and there, too, how would we know?

To ensure that standards were taken seriously, and consistent with a continuing commitment to real reform, as well as the purposes of the *Goals 2000* legislation, new assessments were expected to be aligned with states' standards.

The popular attention to the "high stakes" nature of these new tests is understandable: parents and the public want assurance that students are learning the challenging content of reformed and revitalized curricula. Not just any knowledge -- even basic skills -- but necessary knowledge: the essential knowledge and skills we have identified as the standards for students' learning. Repeatedly, political and educational leaders have stressed the need for tests with "teeth" to ensure that students, in fact, are able to meet the new, high standards set for their learning.

The public discontent with "social promotion" is addressed by high standards for the learning to which all students will be held. Although not yet adequately explored, if students are to meet standards -- conceptually rich and cumulative -- it is conceivable that "grade-level" learning is not even appropriate.[82] Age-gradedness, an artifact of an industrial "assembly line" approach to production, is unnecessary if we are committed to standards-based performance. The measures of achievement are not about "passing" a "grade" -- nor being "retained" in grade; rather, we want assurances that all students know what they need to know -- for their benefit, and our own. Standards are analogous to

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[82] See, for example, Chester E. Finn, Jr., "As Much Time As Necessary (A Key to Better Learning)," The College Board Review, 161 (Fall, 1991), pp. 24-27, 28: "We need to break the age-grade link. That means doing away with the traditional 12 grades of school. Instead we should array the skills and knowledge that young people need to acquire into three broad 'bands' of learning -- primary, intermediate, secondary -- and give each person as much time as necessary to pass through one band and into the next.

"This may sound far-out, but the National Governors' Association has also recommended moving away from age grading, especially in the early years of school. Kentucky's comprehensive school reform plan does away with age grading below fourth grade, and several other states, including Mississippi and Florida, are experimenting with this approach.

"The average student may take four years to move through each band, 12 years in all. But some will tarry longer and others will proceed faster. Passing through a band is not just a matter of putting in an arbitrary amount of time. It means acquiring and demonstrating -- on exams and other measures -- the skills and knowledge that are needed before starting the next band, with these standards cumulating across the bands to become the level of learning that we expect of all new adults." (p. 26)

Interestingly, during the pre-standards-setting period of school reform, John Goodlad noted that his earlier book with Robert Anderson, The Non-Graded Elementary School, (New York, NY: Teachers College Press, reprinted, 1987), was outselling all his books about educational reform and renewal combined.

raising the bar in sport; and once the bar is hurdled, the test is passed, and the next event follows. The "bar" in this reformed schooling context --- the measure of the sufficiency of the expected learning performance, if standards-based -- is, necessarily, neither age- nor grade- dependent.

Though little research on this relatively new reform development has been published -- no state-to-state comparisons of states' education standards with the tests by which they are measuring students' achievement are available -- a certain "knowingness" is emerging to the effect that many allegedly "new" tests are not all that different from what we already had. If true, of course, we vitiate the purpose of standards-setting, and undermine the likelihood of success in this multi-year, multi-millions of dollars federal and states' effort to improve Education. Why raise the bar if something else is being measured, especially if what is being tested was already tested prior to the development of standards for student learning? While new, revitalized curriculum and instruction can contribute, presumably, to students' learning, we cannot count on students knowing what they need to know unless *that* is what we test for. Hence the *Goals 2000* requirement that these new assessments be aligned with states' student learning standards.[83]

Only a few states, however -- certainly, less than half, and perhaps fewer than a dozen -- can show currently that their assessments are aligned with their standards. Many states seem to take pride in how assiduously they are ensuring that the results of their new tests "count,"[84] that there are clear consequences for poor performance. In other words, the

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[83] P. L. 103-227 (103d Congress) "Goals 2000: Educate America Act," Title III -- "State and Local Education Systemic Improvement," Section 306 ("State Improvement Plans"), c. ("Teaching," "Learning," "Standards," and "Assessments") (B) ("a process for developing and implementing a nondiscriminatory, and reliable State assessment plan," (I) ("which assessments shall include") (B) ("a process for developing and implementing valid nondiscriminatory, and reliable State assessments" -- (I) ("be aligned with such State's content standards, (II) ("involve multiple measures of student performance; (III) provide for . . . ; and III.306.c.(1).(C) "a process for aligning State or local curricula, instructional materials, and State assessments with the State content standards and State student performance standards; . . . ."

[84] Much is being made of the fact that these new tests are consequential; they are often labeled, "high stakes," and, indeed, they are -- not just for the students who take them, nor the teachers who teach the students who take them, but for this period of reform and the paradigmatic change in Education that has occurred in the past ten to fifteen years. Simply, in moving from attention to "inputs" and all that the twentieth century system of schooling in the U.S. has come to stand for in terms of its requirements and regularity, to commitments about "outputs" and new notions of performance "deliverables," "accountability for results" -- whether students have achieved desired standards of learning -- is necessarily more important than previous tests, designed by testmakers, to measure ill-defined achievement "levels" unrelated to pre-determined learning goals or teaching expectations or experience. A lot is riding on the results of students' performance in a new teaching and learning environment -- one that has at least been defined, if not developed. Most reformers have derived a certain confidence from the evolution of thinking in this current, and quite serious period of change. Further, many see the economic connections and consequences of new kinds of learning consistent with new economic opportunities. But policymakers and the public are unaccustomed to taking "a faith walk," and have come to think highly of assessment as an effective instrument of assurance of valued levels of learning, arguably based on "scientific" claims of validity and reliability.

For an extremely thoughtful discussion of "Assessment Policy as Persuasion and Regulation," see Lorraine M. McDonnell's August, 1994 article in the American Journal of Education (pp. 394-419), wherein she describes the policy and political value of considering assessment policy as both "hortatory" -- urging action -- and "persuasive," both in a "good" sense, that is, providing data for rational decisionmaking, which, importantly, assumes "neutral facts," and, its less good, or "bad" sense, which is, quoting Deborah Stone (1988), that "the rational ideal not only overstates the purity of information, it also

"stakes" for students (and teachers), are indeed "high." But political and educational leaders appear fatally unaware of the significance of non-alignment of their states' standards and assessments. In some states, already, results on new tests are determining student and teacher performance, and shaping public opinion, absent clear indications that what is tested is what has been specified to be taught and learned. Chillingly, many states are undermining an enormous investment -- of ideas, public process and commitment, and educational effort -- over a decade of thoughtful reform -- by blithely putting in place (and proudly pointing to the tough consequences of poor performance on) tests that cannot be shown to measure what they have, corporately, said is essential in education. Moreover, there is no evidence that any states have thought about using their assessments to evaluate or judge the quality of their student learning standards themselves.

The reasons for this "disconnect" are unclear, but a lack of alignment, in itself, is cause for concern. Suffice it to say, that standards-based student learning is seriously at risk to the degree that states' assessments do not test for that learning. And, teacher education and licensure are held hostage inasmuch as what it is that states want students to know, and what it is that states are testing are not necessarily connected or the same. Teachers cannot be caught on the horns of a dilemma between standards-based teaching -- what the state has determined students need to know -- and orthogonal tests on which the students, as well as the teachers, are being judged.

How did it happen, in this focused, progressive reform effort, that states' tests may not match their standards? For one thing, many states developed assessments simultaneously with state standard-setting, but separately from that process. While the standard-setting was a very public -- and publicly participated in -- process for ascertaining what were desired student learnings, test construction seems to have been left to "experts": the testing and assessment staff in the state Departments of Education; "consultants" -- individual or corporate test developers who took on the task of translating a state's student learning expectations into appropriate assessments; and the large-scale test construction companies who currently control most educational assessment.

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exaggerates the rationality of people using the information." (p. 400) She also examines assessment policy as part of the mix of policies necessary to maximize the potency of political action. That is, policymakers, educators and the public have a mutual interest in including assessment requirements as part of the "package" of reforms in order to increase the likelihood of the success of the desired direction established. And she explains how, in recognizing "the importance of timeliness, of moving quickly while the policy window is open," cautions about the adequacy of assessments are deferred, assuming that problems will be remedied "simultaneously with the implementation . . . ." (p. 401) Moreover, to act strategically, policymakers "must appeal to values that are strong enough to motivate action . . . . Not only must policy targets be mobilized around a set of values on which there is widespread consensus, but technical information must be simplified and interpreted within the context of those values." (p. 402) "Recent examples of a broad-based appeal to values," she suggests, "are the six national goals promulgated by President Bush and the nation's governors in 1989, and subsequent proposals for linking assessment to national curriculum standards. The assumption underlying this hortatory strategy is that the goals and standards will be understandable to the general public, and that, at least at a general level, they will be supported because they are linked to positive values such as 'high expectations for all students,' 'preserving democracy,' and 'improving economic competitveness.'*f* Subsequent events have demonstrated that this strategy faces a variety of political, fiscal, and technical barriers to successful implementation. Nevertheless, it exemplifies the use of persuasion to begin a policy process that may later be linked to other types of policy instruments. In addition, the assumptions behind this strategy are that it will produce effects that are more than rhetorical or symbolic. Underlying the notion of national standards is a belief not just that there will be greater coherence and commonality in what is taught across the country, but also that overall levels of achievement will rise." (pp. 402-403)

Where relied on, state evaluation staff may not have been engaged in the in-state standard-setting; counting on their ten- to twenty year history of student testing and evaluation, rather than working self-consciously in a reform context. It is not surprising that much of what they have developed is very recognizable to educators, parents, and the public, perhaps even "comfortable" in-state. But there is no clear mechanism for rigorously evaluating these state Departments of Education assessments against the state's standards on which they purport to measure students' achievement. And, even though the assessment and evaluation staff in most states are highly knowledgeable and professional, they are sometimes unfamiliar with their state's standards, and the implications of these new learning expectations for the kinds of tests now needed to capture student achievement.

In the case of outside consultants, there is no published evidence of evaluating their work against the state's standards. That is, the state has paid for a test to be developed, and, then, administered it, without reporting any full assessment of the assessment itself in the context of the state's standards.[85]

And large-scale purveyors of tests are not only far removed from the nuanced formulations of most states' standards, but their involvement is somewhat suspect due to an undiscussed conflict of interest in the conduct of current work. For years, testmakers -- private companies -- have been determining essential learning -- "setting standards," *de facto*, by virtue of what knowledge they test for -- that is, what it is necessary to know.[86] Over the years, certainly, testmakers have developed valid and reliable assessment instruments. But to test what? Validity and reliability are self-referent, to the test itself, not to state- or school-set learning expectations. The problem now is that these large-scale tests may not -- likely do not -- measure what states have said they want to be sure students know. The methodology may be pristine, in other words, but still not measure what we want it to.

This emerging problem of unaligned assessments occurs in its own context of change. For at least two decades, educators have struggled with weighty issues involved in testing students. Racial and gender bias in traditional standardized tests -- essentially limiting some students' opportunities in education -- have been the focus of many of these examinations and analyses. Though criticism currently is somewhat muted, issues of racial and gender bias are substantially unresolved. When, as now, new assessments are developed, the opportunity to "get it right" this time is extremely important, and appears to be unaddressed. Beyond the obvious and well-studied inequitabilities related to gender or race, however, are the monolithic patterns of schooling that foreclose diverse and divergent, or simply, different, thinking. Howard Gardner's work on different ways of knowing,[87] for example, has huge implications for how we appreciate[88] and assess the

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[85] While, for example, Texas, takes pride in the work of its Iowa test developer, and has forcefully implemented statewide high-stakes tests, reportedly, with very regimented instructional activity to insure uniformly high test performance, there is not a comparable conversation about, or evidence of, similar focused attention to the quality of the test itself in relation to the Texas Essential Knowledge and Skills (TEKS).

[86] A good example of this *post hoc* standards-setting is Donald M. Stewart's claim, in a February 2, 1994 *Education Week* article, that advanced tests of students' learning constitute "high standards" in the United States, citing "[t]he College Board's extensive hands-on experience with 'standards-setting' over the last 93 years . . . ." http://www.edweek.org/ew/vol-13/

[87] Howard E. Gardner, Frames of Mind: The Theory of Multiple Intelligences. New York: Basic Books, 1983.

[88] I am indebted to Professor Elliot Eisner of Stanford for a view of assessment as "appreciation," as a piece of art would be viewed.

knowledge we believe students need. Current ideas about "difference" and "inclusion," too, must be considered in assuring ourselves that all students are learning challenging subject matter, and demonstrating their learning appropriately and satisfactorily.[89] And, conversely, we need assurances that new tests are capturing the full range of student thought and understanding.

Furthermore, continuing conflation of intelligence and achievement confuse everyone and allow for false perceptions of student ability and achievement and unjustified separations of students and learning environments. In the name of efficiency -- and under the misguided belief that measurable student differences were more salient pedagogically than they are -- we have continued to separate and "track" students into different levels of learning opportunities, foreclosing many students' access to an education of value, and frustrating the realization of our ideas of variety and diversity in education. Indeed, Professor Jeannie Oakes[90] shows that students consigned to low-level learning opportunities never learn the requisite knowledge and skill to "progress" to more interesting and challenging, and useful, knowledge. With the standards movement in school reform, we, as a country, and across the states, have recommitted ourselves to the centrality of high educational performance for all our students, obviating this curricular separation.

Ensuring equitable opportunities for learning is pre-requisite for fair assessment. Yet we know the uses of tests often have constrained curriculum and instruction in schools, and limited individual and group opportunity for high quality learning. To ensure all students' adequate opportunities for learning what they need to know, it is important to distinguish between summative and formative evaluation. In the end, what did the student know; as opposed to what did the student know and understand to *inform* what was next needed to be learned. Interestingly, we have no experience with assessing knowledge against pre-specified, but non-specific, standards, either formatively, or summatively. Rather, we assess most students' knowledge in itself, summatively, as presented in the texts selected, and shaped by the instruction provided. Most educators have left it for others to determine what constitutes essential learning; few even supplemented the curriculum very much, let alone attempted to supplant existing curricular expectations.

In the relatively rigid, and hierarchical structure of American public schooling, processes have been developed for text adoption, usually consistent with state and local curricular and grade-level learning objectives. Little room -- or time -- was left for individual adaptation or substantive change. (A major, though little discussed, difference between public and private schooling, k-12, is the responsibility invested in private school teachers to develop, and continually adapt, the curricula central to each school. In larger public school district organizations, curricular decisionmaking about texts and tests is conducted quite far from most teachers and students. It is only in individual instruction that public school teachers can extrapolate beyond the materials selected for the schools' or grade-level students.)

Given the sorry, often conflicted or ambiguous, state and status of teacher education, removing the decisional power for changing teaching and ensuring desired or desirable

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[89] See, for example, three related *Education Week* articles by Lynn Schnaiberg, "Group To Develop Content Standards for E.S.L. Students," (June 16, 1993), p. 15; "Advocates Seek Place for L.E.P. Students in Standards Movement," (March 30, 1994), p. 6;; and "Standards Seek To Address Needs of ESL Students," (June 25, 1997) http://www.edweek.org/ew/vol-16/

See, also, Debra Viadero's *Education Week* article, "Special Educators in Quandary Over Role in Standards-setting," (May 5, 1993), p. 10.

[90] Jeannie Oakes, Keeping Track (How Schools Structure Inequality). (New Haven, CN: Yale University Press, 1985).

learning may be a reasonable course of action. But in setting standards, in states and subject areas across the states, we have changed the role and status of teachers, regardless whether we realize it or are ready to strengthen and support that role. (If, for example, mathematics standards are set in developmental bands modeled on the NCTM standards, it is necessary for mathematics teachers of students in that broad category to work together to ensure that relevant concepts are introduced and emphasized and built upon appropriately, not only to ensure that students satisfy the standard over time, but that the requisite conceptual groundwork is laid to support further learning, appropriate to students' continuing conceptual development in mathematics.)

Formative evaluation takes on new relevance and possibility in the context of student learning standards -- to be met over, presumably, different periods of "time," as well as across different kinds of important "learnings," and with a more robust view of a learning continuum. That is, if we set rich and challenging standards, not only must our assessments for attaining or meeting them necessarily change from the narrow, standardized testing to which we have become accustomed, but, so must much of our teaching. Put simply, in the argot of computer technology, to get a different output we need different "through put." Teachers trained for the lock step learning we required for industrial productivity, are no longer needed in the core knowledge dissemination sector of our Information Society. They are as out-moded as age-graded textbooks, where new knowledge and information is usually simply added in color boxes or sidebars, and seldom substantively integrated in textual material -- often for years. Integrating the ideas undergirding the standards we have developed will take time and thoughtfulness and, new and differently trained teachers.

Similarly, it is already apparent that standards-based reform connotes new accountability mechanisms, requiring different assessments. It is an educational truism that "you get what you test." When assessments are developed apart from the content necessary to know, or by a single, or a few, testmakers -- whether in the state Departments of Education or "consultants" elsewhere -- separated from teachers and learners, it is not surprising to find that many of the, allegedly, new tests are sometimes far removed from the standards we have set for student learning. Already, many states' high-stakes testing may be subverting the commitments and investments of standards-based reform. Even though most educators and the public believe that the "new" tests are the coordinated, or aligned, assessments they were meant to be.

Across the country, headlines have been reporting abysmal scores on these new, high stakes tests.[91] We are beating up teachers and students and scaring the citizens of our communities with the unhappy results of these allegedly "new" assessments that, so far, have not been shown to bear much relationship to the student learning standards publicly set in each state. To believe that either individuals removed from the standards-setting process, or test construction industries, have internalized the conceptually complex standards we have endeavored to set in our several states, is both risible and regrettable. The Education Governors and Chief State School Officers who have derogated their responsibility for ensuring results, allowing development of inappropriate examinations will get the false results and useless reports they deserve. But we and our students will suffer substantially unless educators and the public demand assessments consistent with the standards they have set in this period of school reform. Besides being funded by the federal government, many states augmented Goals 2000 money with local funds, to ensure the amplitude and relevance their citizens expected. To subvert this investment with ill-

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[91] A recent example: Victoria Benning, "Most High School Students Flunk New Va. Exams," *The Washington Post*, (November 4, 1998), pp. B1, B6.

conceived or unrelated tests is indefensible. Almost fifteen years of reform can be frustrated, and progress foreclosed, by unaligned assessments.

Perhaps too little guidance was provided to the states in developing the assessments required by the federal *Goals 2000* investment. (Many states, for example, appear to be modeling their standard-setting and assessment reporting on Title I accountability, rather than rationalizing assessments and accountability in relation to state standards.)

One well-identified problem is that there is no way to tell which states' standards are strong and likely to produce high quality learning, and which are weak or, even, perhaps merely political or pointless. Absent any over-arching review, the "quality" of states' standards is, literally, in the minds and best efforts of those who set them in each state. The states' assessments, then, are constructed in the context of expectations for learning that may or not be of high quality

When, two years ago, President Clinton called for a national standards-based test for all students, he may well have been trying to ensure educational quality for all Americans, across the several systems of the states. But, living, as we do in Alaska, one of only six states which "volunteered" to take the voluntary test, we run a very real risk that our students will not do well in the subsequent, expected cross-state comparisons of student learning -- either because our standards were not well-conceived or because all our students are not being well-educated in a standards-based curriculum. *Education Week* has publicly rated Alaska's standards as sub-par, because they are "voluntary" across school districts -- which allowance for idiosyncratic variability is very "Alaskan," but begs the question of ensuring educational excellence to all students and expecting high performance from all.

The proposed national test has been stalled in Congress, and may be "dead." But the issue of some kind of over-arching assessment of quality in states' standards-setting and corresponding assessment system is still important. Ironically, as already noted,[92] the preceding, Republican, Administration called for national standards;[93] the subsequent, Democratic, administration decentralized standards-setting to the states.[94] If states do not measure up to a new bar for performance expectations, however, the locus of control -- the states' local control, and local responsibility for results -- could change. Education is about excellence, not local territory. It is the requisite prelude to democratic living, and not to be denied.

Finally, current assessments of students' learning measure in-discipline, or parcels of, knowledge, not the integrated and critically appraised knowledge we know we need for high performance economically and socially. The integration of knowledge across the disciplines is a huge task, left largely to teachers to forge relevant connections and help students make meaning interdisciplinarily. Teachers, however, are taught in contemporary colleges and universities where their own learning occurs in distinctly divided knowledge sectors. Nothing in teacher education programs is designed to connect knowledge across disciplines, let alone to appropriate pedagogy and performance in each. In schools,

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[92] See articles cited at *f* 79.

[93] See, for example, Chester E. Finn, Jr., "National Standards: A Plan for Consensus," ([National Standards for American Education: A Symposium], Teachers College Record, 91: 1 (Fall, 1989), pp. 3-9), or, "Why We Need a National Education Policy," (Education Digest, (April 1990), pp. 8-10).

[94] P. L. 103-227 (103d Congress), "Goals 2000: Educate America Act," Title III -- State and Local Education Systemic Improvement," especially Sections 306 ("State improvement plans); 309 ("Subgrants for local reform and professional development"); 318 ("Prohibition on Federal mandates, direction, and control"); and 319 ("State and local government control of Education").

knowledge and information organization is modeled on colleges and universities, and content standards have been set similarly. But solving problems, using many kinds of knowledge simultaneously is increasingly important. And, certainly, in elementary education, students' learning environments are interdisciplinary. How might we begin to think about students' demonstration of their knowledge and understanding in multi-disciplinary, multivariate ways? And what would that kind of assessment mean for more accurate judgment of student learning? And, as well, how would such student learning expectations change our expectations for excellence in teaching?

For the present, it is difficult to gauge excellence in states' standards and assessments. Some researchers around the country currently are looking closely at selected states' standards and assessments; what they find will be useful information for all of us.

We had expected something else, however. In 1996, the Governors called for a second Summit on Education, in which forty Governors and forty-nine corporate leaders participated. Out of their meeting, a new organization was born, ACHIEVE, INC., which was charged with benchmarking states' standards, much as companies benchmark, or compare, their own work against excellence elsewhere.[95]

Over a two year period, ACHIEVE expected to benchmark all states' standards in four subjects: English, mathematics, science and history: by summer, 1998, English and math, and by summer, 1999, science and history. By summer, 1999, however, those plans had been abandoned. The standards for one of two pilot states' -- Michigan[96]--had been evaluated, using ACHIEVE's Benchmarking Services, an analysis of "state standards, assessments and accountability systems to see how they measure up to the best in the nation and the world, [offering] states specific recommendations for improving them."[97] (Unfortunately none of the analytical comparison data is publicly available.) Standards from the second pilot state, North Carolina, are in the process of being benchmarked. Four other states have been identified for subsequent standards benchmarking: Indiana, Illinois, Pennsylvania, and Oregon. And ten states are participating in a math standards benchmarking partnership with ACHIEVE.[98] But neither the anticipated benchmarking in core subjects across all states, nor any comparable review of states' standards is contemplated.

Curiously, The New Standards Project, in which seventeen states and "a half dozen" districts "which together serve half of America's schoolchildren,"[99] are collaborating to align standards and assessments, pre-dated much of the most recent national and state level development of standards. The New Standards Project has been working for the past eight years, attempting to articulate standards based on new and challenging assessments. Well-funded and well-respected, these researchers seem to be outside the current, mainstream work in standards and assessments, however. States participating in the New Standards

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[95] For a description of benchmarking and its utility for educators, see, Sue Tucker, Benchmarking: A Guide for Educators. (Thousand Oaks, CA: Corwin Press, 1996).

[96] ACHIEVE, INC., Academic Standards and Assessments Benchmarking Evaluation for Michigan. [In partnership with the Council for Basic Education and the Learning Research and Development Center at the University of Pittsburgh] December, 1998.

[97] ACHIEVE, INC., "Putting Education Standards to the Test." Washington, DC: ACHIEVE, INC. (n.d.), first page.

[98] The ten states in the Achieve math partnership are Illinois, Indiana, Maryland, Massachusetts, Michigan, New Hampshire, North Carolina, Vermont, Washington, and Wisconsin.

[99] Warren Simmons and Lauren Resnick, "Assessment as the Catalyst of School Reform," Educational Leadership, (February, 1993), p. 11.

development have, independently, engaged in Goals 2000 standards-setting and developing requisite assessments. No tension between the two activities has been reported, though it must surely be felt, since one approach -- in 49 of the 50 states -- begins with *Goals 2000*-supported standards-setting and endeavors to develop assessments aligned with them. While The New Standards Project researchers, similar to traditional testmakers, seek to develop fine measures from which they expect to extrapolate learning standards.

Regardless of the form for assessment of standards-based learning, however, certain accountability issues still obtain. If we have, indeed, in setting standards for student learning, re-formed education, how do we know we have improved schooling? That what we have developed is better than what we had? What do we expect differently from teachers? And how do we prepare them appropriately for new responsibilities? What is the necessary professional development agenda for teachers already at work? How should schools and school systems be re-structured to support the learning we have specified?

And who is responsible, really, for all the system change necessary to instantiate standards? Who will revamp teacher education and continuing professional development? How are all the relevant interests in education responsible for the desired outcomes? How will we remake education while it is in progress? (As former Governor Romer often opined: school reform "is a little like repairing the airplane when you're flying it.")

Certainly, much more work is required to clarify how we assure students opportunities to learn what we want them to know. In focusing on results, a new fairness agenda moves beyond assessment to accountability -- not merely for realizing expected outcomes, but for providing students appropriate opportunities to learn what they need to know. In a democracy, that is everyone's duty.

Teaching

But those most directly responsible for students' learning are teachers.

Advancing through disparate reform initiatives, during these past fifteen years, we have finally focused on the central educational act: the dyadic interaction of teaching and learning.

We have articulated -- however variously, or validly -- what we want all students to know and be able to do. Now we have to be sure that teachers can teach students what they need to know. Remarkably that is a new expectation in education. While it may be obvious that teachers should teach what we want students to know, we have never been so clear in consensus about what constitutes students' necessary knowledge.

Certainly teachers -- generations of fine teachers -- have been able to teach. Many good ideas about necessary knowledge have guided teaching and informed and improved enlightened schools and communities. There are more ideas about what is valuable or essential than we can comfortably fit in the form schooling has taken. We are proud to provide residents of our country twelve years of free public education. But new social, and, particularly, economic circumstances require new knowledge held by more people to shape a future that benefits us all.

For almost a century, we have thought educational quality was a function of *time* -- time-on-task, "periods" of subject-matter study, hours of the school "day," days in the school year, "contact hours," "credit hours" and Carnegie units; it is not. Educational quality inheres in the interaction of teaching and learning. The "sticking power" of standards,[100] indeed, may be due to the centrality of our inquiry about what students should know and be able to do, and, concomitantly, current concern with preparation for teaching in this new educational environment. We are finally focused, not so much on the "structures" of schooling, but on the fundamental relationship of teaching and learning.

Teacher Standards and Assessments

For all the confusion in understanding standards for students, the conflation of meanings in speaking of standards is most obvious in teacher education.

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[100] See, for example, Finn, "National Standards: A Plan for Consensus." Cross, "The Standards Wars: Some Lessons Learned" and, with Scott Joftus, "Stumping for Standards," already cited. And, as well, the *Introduction* to the annual AFT publication, Making Standards Matter, also previously cited.

See also, Linda Darling-Hammond, "National Standards and Assessments: Will They Improve Education?" American Journal of Education, 102:4 (August, 1994), pp. 478-510; Kenneth R. Howe, "Standards, Assessment, and Equality of Educational Opportunity," Educational Researcher, 23: 8 (November, 1994), pp. 27-33; Andrew C. Porter, "National Standards and School Improvement in the 1990s: Issues and Promise," American Journal of Education, 102: 4 (August, 1994), pp. 421-449; and Richard W. Riley, "Reflections on Goals 2000," Teachers College Record, 96: 3 (Spring, 1995), pp. 379-388.

In a panel discussion at a national education conference this summer, a Dean of Education brightly, confidently, asserted that, "We've always had standards in teacher education -- our accreditation standards."

The staff persons in state Departments of Education who review teacher candidates' course-taking and approve teacher preparation programs in-state have called items on their NASDTEC checklists for program approval, "standards" as well.

A new National Board for Professional Teaching Standards has developed standards for advanced teacher professional practice.

And in most post-secondary preparation programs, professors routinely speak of the high standards aspired to in their academic and practical preparation of future teachers.

But few teacher educators or teacher education preparation programs are aware of and responsive to the learning standards for students developed over the last decade.[101] At their peril.

Educational and civic leaders -- for the first time in our country's history -- with vast public participation, have determined what all American students should know and be able to do, often, and necessarily, describing sufficiency in meeting these public expectations. Many have been trying to develop measures for assessing students' performance in meeting states' standards, as well. And, while these students' learning standards differ somewhat from state to state, they are still similar -- in part because most rely on or incorporate national disciplinary association standards, and, in part because representatives of states' Departments of Education have had several years in which to review, and compare, each others' work.

The intellectual, programmatic, and monetary investments in standards-setting for students' learning has resulted in definitions of what we as a people think necessary learning for our children and youth. What we believe is essential education. We may do more, but we must assist students in meeting this level of expectation.

Standards-based education is not the totality of education itself, nor even a robust definition of the best of all possible educations. But neither is it merely "basic" skill development, nor a description of "minimal competency."

Rather, standards in Education stand for what people across knowledge domains and regional diversities have set as necessary knowledge. Only a democracy could foster such free thinking and public expression of purpose and will. And what has been defined across the states is meant, fairly, for everyone. For we are as strong as all of us are strong, our combined knowledge is the sum of all our learning. We all benefit from individual and shared accomplishment.

Although many educators have been engaged in the public processes of education standards-setting, few fully appreciate how the work of all educators will be changed by the standards that have been set for students' learning.

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[101] The American Federation of Teachers' annual evaluations and comparisons of states' standards, cited previously, provide useful criteria and conclusions, and, as well, include responses from states' Departments of Education. (Making Standards Matter, Washington, DC: AFT, 1995, 1996, 1997, 1998.)

First, public expectations for education are now clear; they have never been so well-specified. Parents and the public now know what they can expect of education. They will want it.

Second, the public processes of standards-setting have been essentially civic action, with all the political power that connotes. The same public funding that supports k-12 schooling, supports public institutions' teacher preparation and teachers' continuing professional development in schools and districts. If public dollars are not being expended wisely to assure desired results, it will be easy to find out why.

And, finally, crassly, students' standards-based knowledge will be tested. And their tests will be the tests of teaching quality and effectiveness we have never had. Teacher performance, in turn, will take the measure of the programs that prepare teachers[102] -- a real "test" of public post-secondary education's value in preparing educators for our schools.

We do not need standards for teachers, *per se*; though there are some standards for teachers on which we can rely in shaping teachers' preparation and licenses to practice.[103] The standards essential to teacher education and licensure, however, are clear in the standards set for students.[104] Thoughtful reflection on these standards for students, and careful self-study, should yield informed critiques, integrated analyses, substantive subject matter modernization, and updated, revitalized teacher performance consistent with advances in cognitive psychology, speech pathology, neurology, and a host of other disciplinary research bearing on the optimal conditions for learning.

A significant value of teacher education's location in colleges and universities has been Education's perceived connection to the arts and sciences, to core, and developing knowledge. To the extent that teacher education is marginalized on most university campuses, however -- the tuition from these large "cash cow" programs is taken in, but the institution as a whole shares little responsibility for the quality of teacher preparation -- separated from necessary knowledge or simply consigned to second-rate status -- public post-secondary institutions are failing the public.

Particularly in Land Grant Institutions like our own. When Congress appropriated the initial funds for these public institutions, last century, they were called "Democracy's Colleges." This country should still be able to count on them to fulfill public purposes, shaping the American mind and enabling our society's economic progress. We are no longer primarily concerned with the "agricultural and mechanical arts," but we have a duty to inform American schooling in the knowledge and skill relevant for today's and tomorrow's students.

At the beginning of this period of school reform, many large land grant and other research universities banded together to take responsibility for teacher education in a newly urgent and substantive way. The Holmes Group was an important collaboration of universities stepping forward to take corporate responsibility for teacher education; and the Holmes Partnership continues meaningful collaboration between schools and these places where

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[102] The new Title II reporting requirement is reproduced as Appendix I.

[103] Cf., the standards for teachers in 4 AAC 04.200. "Professional Content and Performance Standards," 1997, 2 pp.

[104] Alaska's standards for student learning are widely available. In statute ("Alaska Goals," 4 AAC 04.010 - 4 AAC 04.060, pp. 8-16 (1994); 4 AAC 04.070 - 4 AAC 04.100, pp. 1-10 (1995), and Amendments 4 AAC 04.11; 4 AAC 04.120; 4 AAC 04.130 (pp. 1-8, Register, 1995); and in wall posters and pamphlets: "Alaska Standards (content Standards for Alaska Students."

teachers are prepared.[105] Universities' strong sense of their responsibility for preparing the teachers we need is vital to the quality of American schooling.

Moreover, if standards-setting fulfills its promise to reconceptualize and reorganize teaching and learning in elementary and secondary schools, colleges and universities will be welcoming a differently prepared student in the near future. Yet college and university curricula are almost impervious to change, and American post-secondary institutions have no history of change in response to elementary and secondary education. Even though some faculty members from post-secondary institutions have participated in disciplinary standards-setting, the identification of essential knowledge has likely not been applied to, or built on, in college and university curricula. (Indeed, in a preliminary literature review of post-secondary standard-setting in education, or curricular change in response to it, only two citations on post-secondary curricular change related to k-12 standards -- apart from teacher education (found exclusively in writing for teacher educators) -- could be found in this decade of near constant discussion of educational reform and education standard-setting.[106])

The burden for "translating" this new k-12 reality to colleagues in the academic disciplines will fall on faculty members in Education who are, hopefully, simultaneously engaged in change processes to alter teacher preparation to meet the needs and expectations of elementary and secondary education. It will be a lot of work.

But the consequences to colleges and universities of not changing, will be severe. Already competing learning opportunities are broadly available outside the university in the Internet and Web worlds, as well as the alternative colleges and universities that have sprung up in every major metropolitan area around the country. The sheer number of potential teachers to be educated will surely spawn a variety of training programs, integral to colleges and universities and outside them.

It is the states' Departments of Education who have the responsibility to license teachers; and, now with standards for students' learning well-defined, and assessments of that learning underway, states have a new mechanism for measuring teacher quality, which they will surely use. Not just to test the teacher preparing programs, but to prove the worth of many potential teachers prepared outside traditional paths of teacher education. It is more crucial than ever for colleges' and universities' teacher preparation programs to work closely with states' Departments of Education.

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[105] The Holmes Group association of large university teacher-preparing institutions has morphed into The Holmes Partnership which adopted much more specific partnership relations with schools and districts. John Goodlad's multi-state network of school-university partnership has had the most sustained commitment to simultaneously reforming schools and the Education of educators. And a number of other connections between the schools and teacher-preparing institutions, all cited in Thomas C. Corcoran, Transforming Professional Development for Teachers: A Guide for State Policymakers (Washington, DC: National Governors Association, 1995), pp. 40 and 41, merit mention: the American Association of Higher Education Community Compact supported collaborations, partnerships supported by the National Science Foundation, collaborations under the aegis of The National Center for Urban Partnerships, Recruiting New Teachers, the Council of Great City Schools, and the Council of Great City Deans of Schools of Education "are working together to improve the recruitment, induction, and professional development of teachers in urban areas." At the heart of many of these collaborations is some form of "professional development schools," first advanced by the Carnegie Forum on Education and the Economy and the original Holmes group, primarily devoted to school-based pre-service development of teachers.

[106] Pamela Keating, "Education Standards: The Challenge for Colleges and Universities," ASHE-ERIC Higher Education Reports. Washington, DC: ERIC Clearinghouse on Higher Education, (forthcoming).

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Clearing the confusion about professional education standards is simpler than it seems, however, if teacher educators take cues from the states' public standards for students' learning.

The language of standards these past ten years stands for several very specific things:

- clear expectations for students' learning, clearly stated;
- substantial conceptual knowledge and skill in core subjects;
- public support for re-organized, revitalized education that ensures learning; and
- political will.

States' standards for student learning do not constitute a new canon or unitary curriculum. They are the distillation of the best, most important knowledge we consider essential for the common schools, differently developed. Where they are not, we must make them so. Where they are too segmented -- by the disciplinary divisions of post-secondary institutions and academic traditions, educators must make them more integrated. We do not learn in bits and bytes; we internalize ideas that impel our attention, focus our inquiry, and unify our understanding. Standards are just the start.

But the standards we, as a society, across the states, have set must be met. It is up to educators -- everywhere, throughout the learning continuum -- to figure out how to make sure every teacher can ensure students' learning in a standards-based curriculum. Those students' learning standards are, truly, standards for teaching.[107]

Implications for Preparation, Licensure, and Professional Development

The complications and confusions in the language of standards for teachers have to do primarily with different uses of the term as used in the previously separated spheres of teachers' professional preparation, licensure, and continuing development.

While there are many more uses of the term "standards" than most teacher educators and states' Departments of Education personnel need to know, three have special significance, and bear description: NCATE, INTASC, and NBPTS. Think of these organizations as a sequence in the professional development of a teacher: teacher preparation (NCATE is the national accrediting body for teacher education); teacher licensure (INTASC is a new partnership among states -- in the Council of Chief State School Officers -- for developing standards-based teacher licensure); and continuing professional development (NBPTS is a national Board for certifying, or recognizing, advanced professional practice).

The long-standing professional association of teacher educators in this country, the American Association of Colleges for Teacher Education, spun out of its organization the National Council for the Accreditation of Teacher Education (NCATE), a teacher education accreditation unit. Approximately one third of AACTE member institutions are nationally accredited. (As recently as three years ago, a substantial move was made -- in the interests

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[107] As the National Council of Teachers of Mathematics seemed to realize at the outset of this period of reform, simultaneously publishing mathematics standards for students and for teaching. (National Council of Teachers of Mathematics, Curriculum and Evaluation Standards for School Mathematics, and Professional Standards for Teaching Mathematics, Reston, VA: NCTM, 1987.)

of quality control and institutional leadership -- to require NCATE accreditation for membership in AACTE. A proposal that was defeated, but only after a very bruising fight polarizing the association.) In Alaska, UAF and UAA have been members of AACTE.

In 1988, NCATE adopted improved standards for teacher preparing units seeking its accreditation, developing an upgraded, more streamlined process for unit review, including improved training for evaluators, reduced paperwork on the part of the institution undergoing accreditation review, and other changes. Those NCATE standards are regularly reviewed and up-dated. However, they pre-date the enormous work nationally in setting standards for student learning, and are not connected to states' student learning standards. NCATE reviews the unit responsible for preparing teachers in the broad categories of student, faculty and institutional quality, and with regard to, at least nominally, standards in education, including both subject area standards and standards for various professional roles (ie., counselors or administrators). Field reviewers make a recommendation, and then the organization issues a ruling, regarding the accreditation of the unit. In Alaska, UAF received initial accreditation, but failed to gain continuing accreditation, based on the new NCATE standards, when various institutional extensions had expired.

NCATE has been building partnerships with state Departments of Education for providing a single evaluation and accreditation/program review process for Teacher Education units, called NCATE Partnerships.[108] And NCATE is interested in working with all three UA Education programs and the Alaska Department of Education to develop a partnership here.

The Interstate New Teacher Assessment and Support Consortium (INTASC) was established in 1987 as a program of the Council of Chief State School Officers, "to provide a forum for the states to learn about and collaborate on the development of programs to enhance the preparation and the professional development of teachers. INTASC's work is guided by one basic premise: An effective teacher must be one able to integrate content knowledge with pedagogical understanding to assure that ALL students learn and perform at high levels."[109]

Although state licensure simply certifies teachers' preparation to teach; that is a critical step. In 1992, INTASC identified a set of core standards that define "the knowledge, dispositions, and performances that are essential for all beginning teachers . . . . [and] is now translating the model core standards into discipline-specific standards in each of the major k-12 content areas."[110] Prototype performance assessments based on the standards are being developed in member states, first in mathematics, and then, English, language arts.[111] Unfortunately, the much-anticipated INTASC assessments for teacher licensure have been slow to develop. So slow, in fact that most states are using The Educational

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[108] For a list of current member partnerships, see Appendix III.

[109] Interstate New Teacher Assessment and Support Consortium, "The INTASC Performance Assessment Development Project," [Project Description, Year 3] (Washington, DC: Council of Chief State School Officers, 1996).

[110] Ibid. See also, Gordon Ambach, "Standards for Teachers, Potential for Improving Practice," Phi Delta Kappan, (November, 1996), pp. 207-210, which lists the "Model Standards For Beginning Teaching Licensing and Development," on p. 208.

[111] Ibid. [The member states supporting the INTASC Performance Assessment Development Project and developing the standards-based assessments are Connecticut, Delaware, Illinois, Indiana, Kentucky, Louisiana, New York, Ohio, Pennsylvania, Rhode Island, and Texas. Additional support has been provided by The MacArthur Foundation.]

Testing Service's existing, and very basic, Praxis I exam as a proxy for INTASC's anticipated standards-based proficiency examination for teachers.

Since, under the previous Commissioner, the Alaska Department of Education affirmed interest in being both an NCATE Partnership and an INTASC state, Alaska is one of approximately half the states moving, albeit slowly, toward standards-based improvement of teacher education and licensure.

Standards-based licensure must be more than state program approval of teacher preparation based on standards variously developed and understood, however. To achieve the educational excellence spelled out in the states' standards-setting for student learning, states must assure themselves, as well as their relevant publics, that the teachers licensed by the state to teach students in the state can indeed prepare students to master the content expected of them. To be genuinely useful, as well as fair to all students, states' program approval of teacher education should link the education of teachers and the education of students much more thoughtfully, and purposefully, than heretofore. Specifically, state assurances that teachers are prepared to teach must include careful and extensive review of the content teachers teach and how they teach it. Where a state is committed to standards-based student learning, the state's approved teacher preparation programs must include knowledge about the state's student learning expectations, and evidence of clear preparation of teachers to ensure the standards-based education of all students.

But beyond determining initial preparation to teach, we have a responsibility for teachers' continuing professional development following licensure and teaching experience. We all know -- too well -- how many ill-conceived and useless "courses" are offered on college and university campuses, to "count" as professional development for professional educators' progress on pay scales and career ladders. And school districts' boring and superficial, too often "canned" and consultant-driven, "in-service" activity is a waste of public money and professionals' time that is no longer affordable.

As American education is being reformed and re-constructed for a new millennium, energized by a new economic order, we cannot wait for the effect of newly trained teachers in incremental changes. (Presuming, of course, we are able and ready to prepare prospective teachers in new, appropriate ways.) We need all the teachers currently in place, and more.[112] So we must mindfully engage in a new "teacher education," that builds on teachers' existing knowledge and experience and augments existing professional skill to ensure that all our students will be assured an education of value.

The National Board for Professional Teaching Standards was established in 1987 "in response to a recommendation that the Carnegie Task Force on Teaching as a Profession put forth in A Nation Prepared: Teachers for the 21st Century. The National Board sets high and rigorous standards for what accomplished teachers should know and be able to do and certifies teachers who meet those standards."[113]

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[112] Cf., eg., U. S. Department of Education, "'Baby Boom Echo' Heightens Need for Education Action," *Community Update*. (September, 1996), p. 1 and Barbara Vobejda, "Half-Million New Students Will Test School Resources, Clinton Says," *The Washington Post* (September 8, 1998), p. A8.

See, also, Jeff Archer, "New Teachers Abandon Field At High Rate," *Education Week*, (March 17, 1999), pp. 1, 20-21; Ann Bradley, "States' Uneven Teacher Supply Complicates Staffing of Schools," Education Week, (June 3, 1992) http://www.edweek.org/ew/vol-11/; and "Wanted: Teachers to replace America's graying veterans." *The Fairbanks News-Miner*, (September 1, 1996), p. A1.

[113] Mary Catherine Buday and James A. Kelly, "National Board Certification and The Teaching Profession's Commitment to Quality Assurance," Phi Delta Kappan (November, 1996), p. 216.

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This voluntary assessment and certification process consists of performance-driven assessments that candidates are:

- committed to students and their learning,
- know the subjects they teach and how to teach those subjects to students,
- are responsible for managing and monitoring student learning,
- think systematically about their practice and learn from experience, and
- are members of learning communities.[114]

Many teachers and the administrators with whom they work characterize the review process itself as excellent professional development. While the National Board has not certified nearly as many mature teachers as originally hoped, and certainly not nearly as many as are needed, it is expected that tightening the connections between NCATE, INTASC, and the NBPTS will both rationalize and dramatically improve teacher preparation, licensing, and continuing professional development.

These organizations have developed differently, and their separate senses of professional standards are different, but not so dissimilar that they cause difficulty for each others' organizations, or the teachers to whom their standards apply. Their separate work will be strengthened, along with support for excellence in teaching, when they are more closely aligned around students' learning, however. There is a substantial, even remarkable, effort to connect them to support educational excellence, made explicit recently in What Matters Most, Teaching and America's Future.[115]

The National Commission on Teaching and America's Future was formed in 1994 with support from the Rockefeller Foundation and the Carnegie Corporation of New York. "The mission of the Commission [was] to provide an action agenda for meeting America's educational challenges, connecting the quest for higher student achievement with the need for teachers who are knowledgeable, skillful, and committed to meeting the needs of all students. The Commission is dedicated to helping develop policies and practices aimed at ensuring powerful teaching and learning in all communities as America's schools and children enter the 21st century."[116] Chaired by the original "Education Governor" (whose first, earlier, term as his state's leader pre-dated the rest of the Education Governors by years), Governor Jim Hunt of North Carolina, and composed of twenty five other leaders in education, including former presidents of the NEA and AFT, a sitting Governor, a congresswoman, and a former Secretary of Education, as well as diverse civic leaders, the Commission hosted forums at nine national meetings, and met separately six times around the country from 1994-1996. They began their inquiry with three premises:

- What teachers know and can do is the most important influence on what students learn.
- Recruiting, preparing, and retaining good teachers is the central strategy for improving our schools.
- School reform cannot succeed unless it focuses on creating the conditions in which teachers can teach.[117]

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[114] Ibid. See also, National Board for Professional Teaching Standards, "What Teachers Should Know and Be able to Do," Southfield, MI: NBPTS, 1994. Copies are available by calling (800)22TEACH.

[115] The National Commission on Teaching and America's Future, What Matters Most, Teaching and America's Future, New York, NY: NCTAF, 1996. The Commission Report and an Executive Summary of the Report are appended here as Recommended Reading. See also the Appendix for related material.

[116] Ibid., from the frontispiece.

[117] Ibid., p. vi.

Expressing their well-documented chagrin at the barriers to achieving guarantees of competent, caring teachers for every student, the Commission proposed combating low expectations for learning, unenforced teacher standards, flaws in teacher preparation, recruitment, induction, and professional development, and disorganized schools with five major recommendations:

- Get serious about standards, for both students and teachers. [Insisting on accreditation for all schools of education, licensing teachers based on performance -- including tests of subject matter and teaching knowledge, and using National Board standards as the benchmark for accomplished teaching.]

- Reinvent teacher preparation and professional development. [Organizing teacher education and professional development programs around standards for students and teachers, providing professional development school internships, and developing mentoring and teacher evaluation programs.]

- Fix teacher recruitment and put qualified teachers in every classroom. [Aggressively recruiting high-need teachers and providing incentives for teaching in shortage areas, and assisting poor districts to recruit qualified teachers.]

- Encourage and reward teacher knowledge and skill. [Developing a career continuum for teaching linked to assessments and compensation systems that reward knowledge and skill, removing incompetent teachers, and setting goals and enacting incentives for National Board Certified teachers in every state and district.]

- Create schools that are organized for student and teacher success. [Flattening hierarchies and reallocating resources to reduce nonteaching personnel in schools and increasing teaching resources and providing challenge grants for teacher learning linked to school improvement.][118]

Essentially, what the Commission recommended -- well-received in some states, less so in others -- was the development of a closely coupled teacher preparation and professional development system, linking high quality teacher preparation programs -- specifically, NCATE-accredited pre-service education; standards-based state licensing -- a la INTASC; and advanced professional development and National Board certification.[119] The Commission recommended that this framework guide education policy across the country "so that every teacher prepares at an NCATE-accredited institution, demonstrates teaching competence as defined by INTASC standards for initial licensing, and pursues accomplished practice as defined by the National Board for Professional Teaching Standards."[120] It is the most rationalized and responsible plan for thoughtful teacher education and development ever specifically proposed for American schooling. And development is well along.[121]

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[118] Ibid., p. vii.

[119] The Commission depicted Teacher Quality as a Three-Legged Stool: Teacher Education Accreditation (NCATE); Initial Licensing (INTASC); and Advanced Certification (NBPTS).

[120] Ibid., p. 29.

[121] See, Appendix III and Appendix IV for current lists of NCATE and INTASC states.

Certainly, some states see the package being bound too tightly, one or another of the three parts is problematic for many prospective teachers, teacher educators, or policymakers. But constructive criticism can only sharpen the commitment to rational, continuous, standards-based teacher education.

In Alaska, excellence in teacher education can be expected to develop as the state presses the teacher preparing institutions -- at least the three public UA programs -- to form a vibrant state-teacher education partnership for simultaneous state Department of Education program approval for teacher licensure and NCATE accreditation. To that end, the state (one of the few states with specific standards for teachers) should invigorate the Alaska Standards for Teachers in relation to the Alaska Education Standards for students, and work across institutions to ensure that teacher preparation is uniformly of high quality and standards-based. To prepare a cadre of professional education leaders for new teacher induction and mentoring, Alaska's Department of Education should also work with school districts across the state to develop opportunities for NBPTS certification for experienced teachers.[122] As an INTASC state, Alaska will be assisted in linking NCATE and NBPTS expectations for teacher preparation and professional development, but state licensure is the fulcrum on which they balance.

The most unfortunate set back in improving teacher education to date is the failure of the Chief State School Officers Organization to have the anticipated INTASC Test for Teaching Knowledge in place. The NCATE-NASDTEC committee that eventuated in the phase-out of NASDTEC was a smooth transition, and the Chiefs made sure their states' Departments of Education eliminated the old program approval activity. But the INTASC licensure procedures have been too slow in coming to the states; the CCSSO staff is now nearly two years behind schedule. No state is pleased to be relying on Praxis I as the teacher test for licensure; it is embarrassing in the context of how much has been invested to date in standards-based teaching and learning.

The Chief State School Officers have a singular opportunity to connect their states' standards for students' learning to standards-based expectations for teacher education, ratifying, or rewarding, the desired result with state licensure to teach. But no one seems to be pressing them to move more quickly, even though they cannot expect to realize their states' expectations for students' learning without a major overhaul of teacher preparation, licensure, and professional development. It may be time for an exertion of professional and public will akin to the collaboration that created and sustained the disciplinary and states' standards-setting for students' learning.

Until states take responsibility for translating expectations for students' learning into expectations for teaching expertise, we cannot be sure we are providing students the opportunities to learn what we have stated we want them to know. In failing to provide sufficient guidance for teacher preparation programs, states are letting them off-the-hook of responsibility for school reform, supporting a kind of "social promotion" for prospective teachers: simply accumulate the correct number of Carnegie units in the approved content areas, with a passing score, and you can advance, with a multi-year license to teach. Leaving licensure solely to a professional accreditation group yields states' authority to

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[122] After multiple discussions in 1995-96, in the state Professional Licensure Task Force, as well as in a Task Force subcommittee to explore "tiered licensure," recommendations were forwarded to the Alaska Department of Education supporting standards-based "tiered licensure" for Alaska teachers, with teachers' professional development plans explicitly linked to school and district improvement plans. (See, Committee minutes for 1995-96) Previous Commissioner Holloway also spoke strongly of the "professional development value" of National Board certification for experienced teachers.

insure teaching adequacy and excellence. Similarly, reducing professional development to the most banal schooling practices misses the opportunity for authentic professional growth and leadership development.

Without a focus on improving teaching that is based in states' standards-setting for students' learning, that informs and invigorates pre-service and in-service learning, the states' licensure decisions are simply *pro forma* ratifications of colleges' and universities' teacher preparation programs. State Departments of Education have an enormous accountability problem, but they -- and they alone -- have the power to solve it.

First, they must improve the alignment of their new assessments with their standards for students' learning. It simply is not fair to students to tell them what is important for them to know, and then not assess their mastery of that necessary knowledge -- testing something else instead. Similarly, states cannot fairly assess students' learning without some significant level of assurance that the states' teachers have taught what the states have said students should know, and on which they have tested their students. The states simply must assure all students relevant opportunities to learn requisite knowledge.[123] Not just the fiscal and structural supports, but, particularly, the pedagogical assurances. Beyond high expectations for students' learning, states must have concomitant high expectations for teaching. And, truthfully, they cannot count on colleges and universities, which have traditionally prepared teachers, to comprehend the comprehensive changes of this period of school reform -- particularly, and specifically, the development of new clear, public expectations for educational achievement[124] -- without changing licensure.

Colleges and universities have no reason to change their traditional patterns of teacher preparation and their erstwhile involvement in teachers' sometime professional development, without sanctions associated with standards-based teacher licensure. The new Title II requirements[125] for publishing colleges' and universities' teacher graduates' effectiveness in preparing their students for passing new standards-based assessments will certainly "get the attention" of post-secondary teacher educators. But students' test results are not enough: they are incomplete, and *post hoc* measures of teaching effectiveness. If states truly want to be sure that those they license to teach can prepare the states' students to achieve the desired level of content mastery and knowledgeable performance, they will insist on teacher education that truly prepares teachers in their state to educate in the states' standards-based curriculum frameworks -- the agreed-upon core learning for the children and youth of the state.

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[123] Increasingly, those opportunities-to-learn also include remedial instruction and special support activity, as well as the threat of sanctions for *not* meeting or mastering the states' standards. For examples, see, the four AFT annual reports on Making Standards Matter, op cit.

[124] The introductory essays in each of the American Federation of Teachers' annual fifty-state reports on efforts to raise academic standards, Making Standards Matter, (Washington, DC: AFT) every year reiterate how unique in American educational history this standards-setting is. "The idea of setting explicit, common standards for our students and harnessing the rest of our education system to them is a relatively new one in this country. Some of our teachers, schools, and communities have always had high expectations for their children, but until recently, we haven't sat down at the national, state, or local level to set clear, measurable standards for what all students in elementary and secondary schools should know and be able to do in the core academic subjects. We haven't organized our curriculum around such a clearly defined set of expectations. Nor have we developed assessment systems that measure whether students are meeting rigorous, publicly-available standards." (1995, p. 3; 1996, p. vii; 1997, p. vii; and 1998, p. vi).

[125] See Appendix I for additional information about the HEA Title II requirements.

INTASC is the only standards-based effort to try to connect the two quite different "worlds" of elementary/secondary students and post-secondary teacher preparation. And, appropriately, it is the Chief State School Officers who have taken the lead. Their diverse Departments of Education are the publicly responsible entities for the public education of the children and youth of their states. But, also, and perhaps more importantly than ever, they have the power to license (or not license) those who present themselves to teach. The old check-off systems in states' Departments of Education that simply ratified approved post-secondary program plans is not sufficient for, and not related to, the new, publicly and professionally developed and statutorily promulgated standards for students' learning. States' Departments of Education now can make the preparation programs meet the needs of the children of each state by enforcing standards-based preparation of teachers for licensure.

To the extent that NCATE standards (or the standards of any other would-be accrediting body)[126] become self-consciously connected to states' standards for students' learning, they will serve a useful certifying role for teacher preparation. Similarly, the National Board for Professional Teaching Standards affords important professional development and recognition for accomplished teaching -- as long as, and to the extent that, it is students' learning standards based. The National Commission vision can be realized in connecting these functions to ensure high quality education for all American children. And, not incidentally, both these pre- and post- teacher development entities are national, not states' based, and so they are valuable, too, for connecting diverse and disparate state expectations for students and teachers. But, it is clear, that with or without academic teacher preparation accreditation, or the post-licensure recognition of teaching expertise, states have the power *right now* to align teaching and learning. States' Departments of Education are publicly responsible for public education, and they hold the power of teacher licensure. This is the alignment that must be made; the nexus that must be developed.

Finally, in forging a high quality learning system for Alaska's students, Alaska has a difficult, perhaps unique, problem: the number of teachers prepared out of state. The Alaska Department of Education, perhaps working with the in-state teacher preparing institutions, certainly with school districts, should devise a mechanism for ensuring that out-of-state teachers know Alaska's standards for students' learning, and the students and their unique multi-cultural backgrounds here. And, if the state is confident in the quality and utility of Alaska's standards-based assessments, perhaps an early, rigorous review and report on new out-of-state teachers' students' test performances will be helpful. Unless Alaska's under-supply of teachers is addressed carefully, however, all the work to improve students' education and teachers' education, licensing, and purposeful professional development can be undermined.

How far this country has progressed with standards-based teaching and learning is remarkable. A change of this magnitude -- literally re-orienting and re-organizing American education around newly articulated public expectations -- takes time. And requires even more education -- for everyone. And that is how, right now, all the education leaders in Alaska can contribute: really learn about standards for teaching and learning and help others understand. It is disconcerting to hear a district curriculum director tell a group of teachers, "Standards aren't anything new; just do what you've always done." Standards in Education *are* new. And, more dramatically, the shift from "in-puts" to "out-puts" is revolutionary in the context of how educational excellence -- and fairness -- have been construed this century. We have much to do to realize the promise of standards in Education. It is, after all, an educational change, for which continuing educational development is required -- for all of us committed to teaching and learning in our society.

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[126] For current AACTE discussion documents for exploring accreditation options, see Appendix II.

Those of us who are teacher educators have a special responsibility: to work closely with colleagues in schools and our state's Department of Education, and, at the same time, and maybe with more difficulty, to work with our colleagues in the Arts and Sciences, and our own Education units, to ensure that our states' teachers are truly well-prepared to educate *all Alaska's children and youth to meet our public expectations for their learning. They* may learn much more, and we may teach much more. Standards are not limits; they are uniform expectations for everyone. Our state has set the standards for the students' learning we expect. Our responsibility, as teacher educators, is to make sure Alaska's teachers -- certainly those we prepare -- can do the job the state will license, and trust, them to do: teach our children well.

In the current context of education reform -- for students and teachers, Alaska has student achievement backwards: school "attendance" may be voluntary; educational excellence is not. No one should receive a certificate for simply "showing up," "doing time." Standards-based schooling means every citizen should earn a Certificate of Mastery. We educators have a shared responsibility to make sure they do.

Recommendations

This exploration of standards in Education was designed to come to some understanding of, and make recommendations about, standards-based teacher education and licensure in Alaska. Reading and research have convinced me -- well beyond what I knew to begin this inquiry -- that standards in Education, emerging from the current fifteen year period of school reform, have huge implications for Education, and, consequently, for teacher education and licensure. Standards, and the assessment of students' standards-based learning, will impact teaching -- and teacher preparation and licensure -- more directly and more variously than previously understood.

In Alaska, we set standards for teachers before standards for students. Instead of *a priori* expectations, however, we should focus on prospective teachers' learning and performance that is intimately connected to -- deriving meaning from -- our expectations for students' learning. And, to the extent that we appreciate the implications of standards in Education -- for all students and teachers -- the more important they will be for teachers' licensure and continuing assessment and accountability. And our own professional worth or utility.

Know appropriate content and pedagogy.

One Alaska Teacher Standard -- the expectation that teachers will know their content areas and how to teach them -- matters more than anything else in the context of Education standards -- as set in core subject matter groups and across the states. Until more amplified measures of teaching competence are developed, prospective teachers will likely continue to be tested mostly on their mastery of content and appropriate pedagogy, which should subsume various social and psychological, individual and cultural understandings.

Teachers will be held accountable for all students' learning; *that* is how teaching competence will be measured.

And university teacher education will be "tested" differently, too, since "subject matter mastery" as a measure of instructional capacity is not necessarily the same as a subject "major" or "minor" or, even, a magnitude of Carnegie units accumulated. Teachers' true tests of their content knowledge will be their students' performance, their learning. Which will be an assessment of teachers' pedagogical competence, as well. And teachers' performance, in turn, will be the measure of teacher education.

Know public expectations for students' learning -- state standards -- and be sure assessments capture what is important.

There is some question about how well states' "new" assessments of students' learning are aligned with states' standards -- whether they are truly capturing what we have stipulated must be learned. Rationally, all educators should be sure that they are tightly coupled, so instructional expectations are clear and assessments are both adequate and fair. Because teachers will be judged on the basis of their students' performance, regardless.

And so will teacher education programs. The new Title II reporting requirements will make teachers' performance public, based on assessments of their students.

All prospective teachers and all teacher educators -- those directly involved in Schools and Departments of Education, as well as those indirectly involved through content studies -- have an interest in the quality and clarity of our state's student learning standards and state assessments of students' standards-based learning. As do the state Department of Education and all schools. We must prepare educators who can teach effectively in standards-based schooling, assuring all students adequate opportunities to learn what we consider essential.

Know the context of your work.

Realizing the achievement of our public educational expectations requires attention to the entire educational system: teacher preparation and continuing professional development; the quality of students' learning environments -- the curricular and instructional contexts in which students can be expected to be exposed to, and to master, relevant knowledge, as well as assessments for demonstrating their knowledge -- and the social and political context in which policy decisions are developed.

Rethinking teacher education and continuing professional development is the shared duty of those who bear primary responsibility to assure all students the opportunities to learn "challenging subject matter" and demonstrate relevant knowledge and skills for their own life fulfillment and the robust social environment we wish for our country and shared culture: the universities where teachers are taught, the states' Departments of Education that license them, the schools and districts that employ them, and the teachers, themselves.

The importance of state expectations for student learning is only fully comprehensible in the context of the recent period of school reform out of which standards for learning developed, and the crucibles of assessment and accountability in which the measures of our students and our education -- of students and teachers -- will be taken.

In education, the American people, as they understand accountability for optimizing results in education, will no longer be content with the disconnection of students' education from teachers' education, the unfocused and uninspiring continuing education and staff development that purportedly "upgrade" teachers, and the states' Departments of Education units that license them and renew their licenses apart from professional performance. It is becoming increasingly clear that the standards set for students' learning will not be met without profound change in the preparation and continuing professional development of those responsible to teach them. We all have an interest in excellence.

Universities' Schools and Departments of Education must work "across the curriculum," with colleagues in core disciplines, to ensure the quality of teachers' knowledge base. Similarly, within the Education units, much more vibrant, and useful, teacher preparation must be developed across disparate faculty sub-specialties, so that teachers are broadly prepared for the complex task of education in a pluralistic society. And post-secondary teacher educators must work in concert with elementary and secondary colleagues -- to improve and energize education for all students.

And all Alaska's educators -- in universities and schools -- should work closely with the Alaska Department of Education to be sure assessments of students' learning are ample and aligned with state standards, teacher licensure is standards-based and judged in performance, and all students are afforded genuine opportunities to learn what we want them to know.

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Appendix

Accountability for Excellence in Teacher Education and Licensure

The American Association for Colleges of Teacher Education is a national professional association of teacher educators to which UAF and UAA have belonged. (It is the parent organization from which NCATE developed.) An annual national meeting is an important forum for research and practice in teacher education. Membership is proportional to an institution's numbers of teacher education students.

Appendix I. REPORTING REQUIREMENTS

Title II of the Higher Education Act has implications for college and university teacher education programs. Appendix I is a memo from AACTE President and CEO David Imig which describes the "Report Card" Guidelines, with the web site for additional information.

Appendix II. PROFESSIONAL RESPONSIBILITIES

Four recent policy documents are related to the substance of this report:

- AACTE Guidance to State Affiliates Concerning State Recognition of Alternate Accreditation for Teacher Education (July, 1999)
- Indiana Professional Standards Board: Resolution Regarding Criteria for National Professional Accreditation (March, 1999)
- AACTE Statement on Professional and Institutional Accountability (December, 1997)
- Reaffirming AACTE's Commitment to Professional Accountability (April, 1996)

Appendix III. STATE/NCATE PARTNERSHIP FRAMEWORKS

Appendix IV. INTASC MEMBERSHIP (March 1, 1999)

Recommended Reading

[Two publications are strongly recommended reading -- for teacher educators, prospective teachers, state Department of Education leaders, and interested members of the Public.]

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[Or, *Summary Report*]